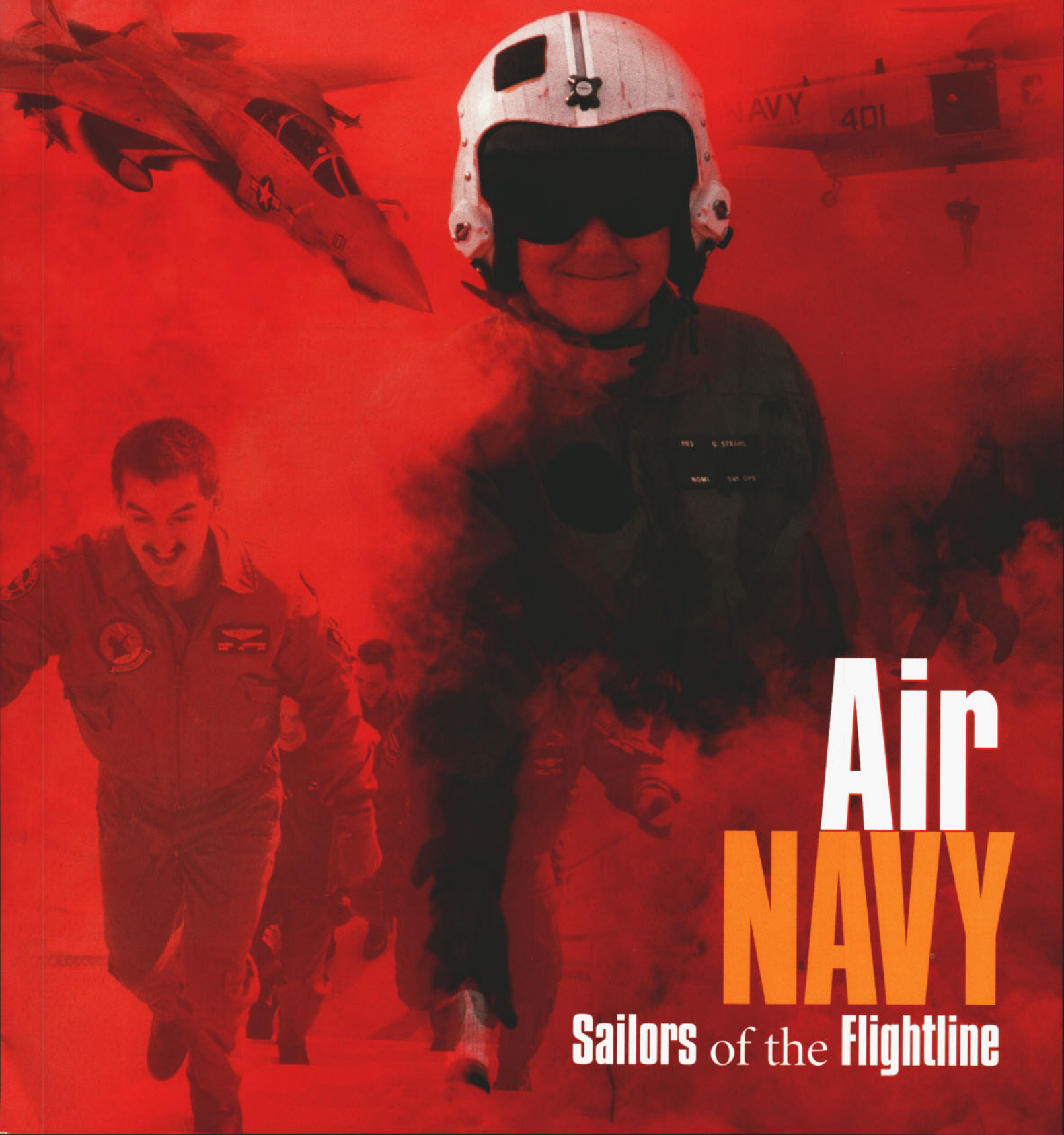


ALL HANDS

MAGAZINE OF THE U.S. NAVY

MARCH 1999



Air NAVY

Sailors of the Flightline



Silver Ozzie Award
Winner 1998

Number 983

Features

12 Yanking and Banking

Step on board and buckle up. Don't worry about adjusting your tray table or making your seat upright – there won't be time for lounging on this 4,600 horsepower turboprop P3-C *Orion*. Your mission is to prosecute subs with Combat Aircrew 7 out of

Naval Air Station Barbers Point, Hawaii.

16 Search and Save

Forget 911. If your boat is sinking and you're near Pensacola, there's only one number you need – that of the Navy's Search and Rescue team, whose mission is simple: saving lives.

19 Awesome Airdales

When a helicopter comes swooping down from the sky to save you one stormy night after your boat has capsized, take a minute to note those inside. They'll most likely be AWs – a mainstay rate in naval aviation.

20 Silent Sentinels

Little known and sometimes forgotten is a collection of seven Navy commands headquartered aboard an Air Force base in the middle of America. These units combine to form Strategic Communication Wing 1 or TACAMO, for "Take Charge and Move Out."

22 Flight Deck Cop

Take an 18 year-old, send him through boot camp and aviation school, and then stick him on the flight deck of an at-sea airport and you'll witness an amazing transformation from kid to professional air director.



16

Photo by JO1 Robert Benson

Secretary of the Navy
The Honorable Richard Danzig
Chief of Naval Operations
ADM Jay L. Johnson
Chief of Information
RADM Thomas Jurkowski
Commanding Officer,
Naval Media Center
CAPT Edward Lundquist
Still Media Department Head
LCDR John Kirby
Publishing Division Officer
LT Paula Dunn
Print Media Coordinator
LT Tyrus Lemerande

EDITORIAL

Editor
Marie G. Johnston
Managing Editor
JOCS Steve Burghardt
Assistant Editor
JO1 Robert Benson
Editorial Staff
JO1 Ron Schafer
JO1 Rodney Furry
JO1 Jason Thompson
JO2 Jeremy Allen
JO2 Brigitte Barnes
DM1 Rhea Mackenzie

DISTRIBUTION

Garland Powell

ART AND DESIGN

Rabil & Bates Communication Design
Creative Director
Debra Bates

Graphic Designers
David Chapman
Aimee Schuppert
Julie Dorman

PHOTOGRAPHY

Photo Editor
PH1 Jim Hampshire
Photographers
PH2 Joseph Gunder III
PH3 Lena Gonzalez

All Hands (USPS 372-970; ISSN 0002-5577) (Number 983) is published by the Naval Media Center, Publishing Division, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St., S.W., Washington, D.C. 20373-5819 and additional mailing offices.

Subscriptions: For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402; (202) 512-1800.

Postmaster: Send address changes to *All Hands*, Naval Media Center, Publishing Division, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St., S.W., Washington, D.C. 20373-5819

Editorial Offices: Send submissions and correspondence to Naval Media Center, Publishing Division, ATTN: Editor, Naval Station Anacostia, Bldg. 168, 2701 S. Capitol St., S.W., Washington, D.C. 20373-5819
Tel: (202) 433-4171 or DSN 288-4171
Fax: (202) 433-4747 or DSN 288-4747
E-mail: allhands@mediacen.navy.mil
Message: NAVMEDIACEN WASHINGTON DC //32//

Authorization: The Secretary of the Navy has determined this publication is necessary in the transaction of business required by law of the Department of the Navy. Funds for printing this publication have been approved by the Navy Publications and Printing Committee.



24

24 The Flight Deck

Yellow shirts, white shirts, blue, purple and red...What do they all mean? Learn your way around the flight deck.

26 I Believe I Can Fly

Evade sharks, get dunked underwater while blindfolded, be lifted up to a hovering helicopter by a thin line. The Aviation Survival Training Center in Pensacola has all kinds of grueling activities geared toward saving aviators' lives.

30 Who's Gonna Jump First?

They are a small team tucked away in an obscure place, but they have a vital mission: to test Navy parachutes. So far, they've all worked – we'll show you why.

34 Waiting in the Wings

It's one of the most storied aircraft in the world today, but the real heroes behind the F-14B *Tomcat* are the maintenance personnel who keep it flying.

34

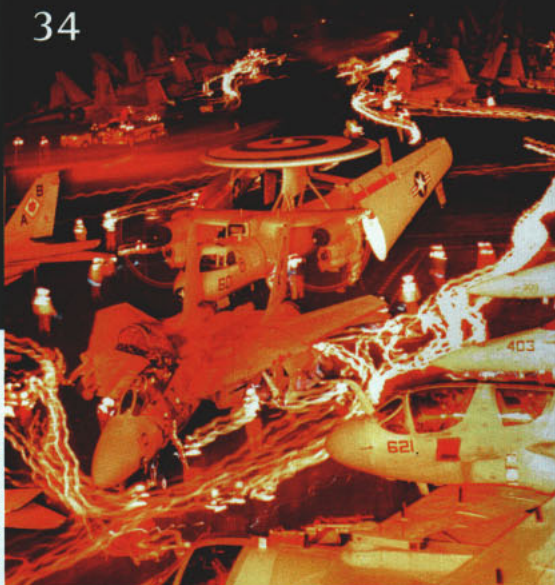


Photo by PH3 Joseph Hendricks

36 Up, Up and Away

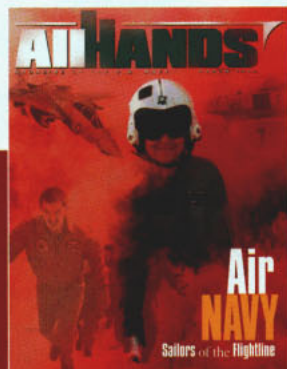
The Navy has planes, trains, and automobiles, but did you know it has parachutes? And a team dedicated to flying them?

40 Reunion

The World War II aircraft carrier *USS Yorktown* (CV 5) was recently found by National Geographic explorers in the murky depths of the Pacific Ocean.

Departments

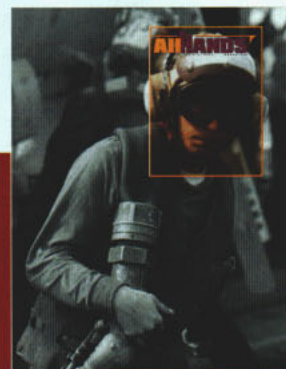
- 6 Letters
- 7 Around the Fleet
- 42 CyberSailor
- 44 Eye on the Fleet
- 48 Shipmates



On the Cover

PR3 Gayle Strahl, a Pensacola Aviation Survival Training Center instructor, is engulfed in the red smoke of a signal flare.

Photo by JO1 Robert Benson
Added Illustration by Rabil & Bates Design Communication



On the Back Cover

ABAR Michael Converso from Chicago, assigned to *USS Enterprise's* (CVN 65) air department, V-4 Division, carries a refueling hose across the flight deck.

Photo by PH2 Michael Pendergrass

Check us out Online at:

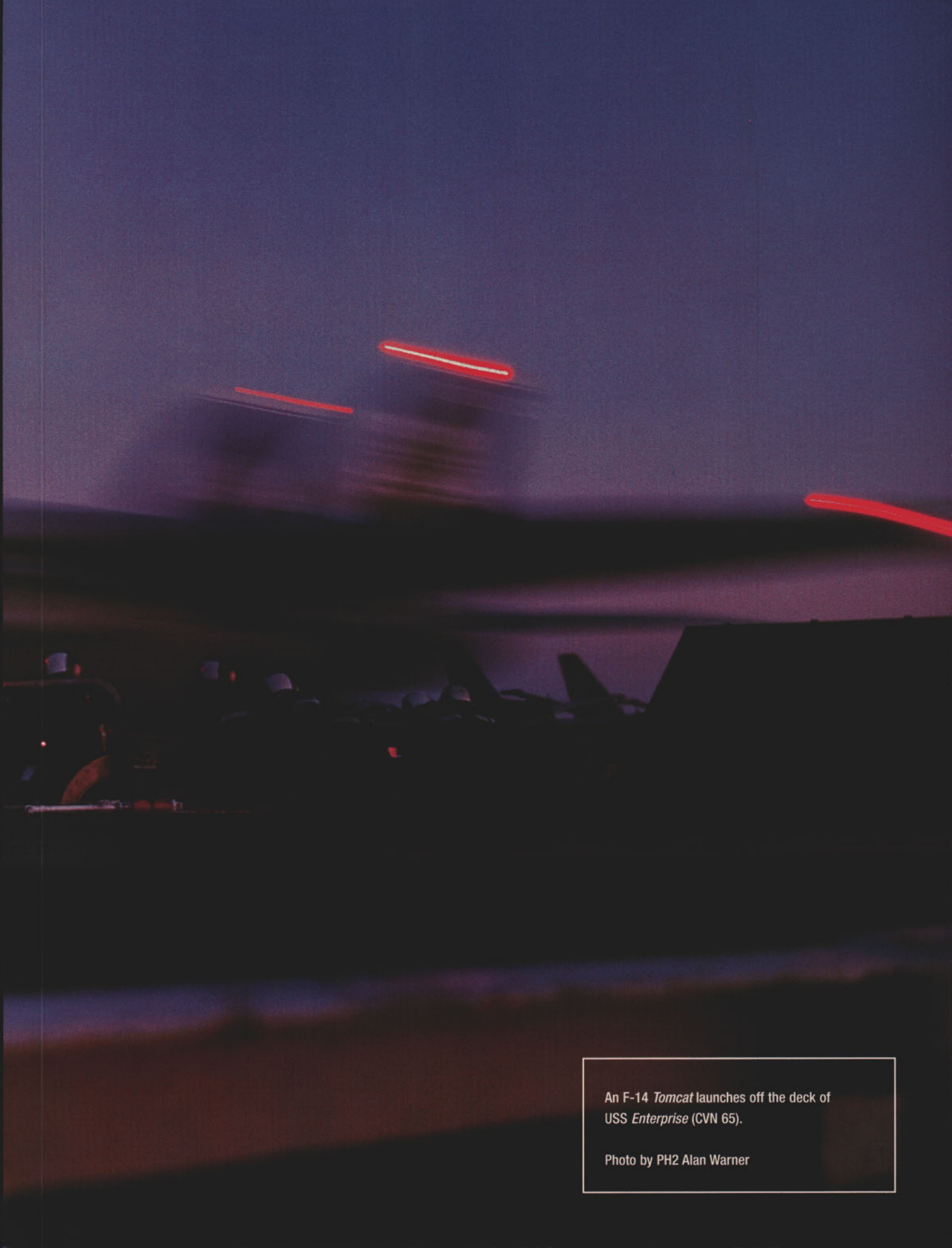


www.chinfo.navy.mil/navpalib/allhands/ah-top.html

Launch

Line





An F-14 *Tomcat* launches off the deck of
USS *Enterprise* (CVN 65).

Photo by PH2 Alan Warner

Shot in **the Dark**





AT3 Rick Morgan from San Diego, troubleshoots a console on an SH-60B *Seahawk* attached to Light Helicopter Anti-Submarine Squadron (HSL) 45 aboard USS *Ingraham* (FFG 61).

Photo by PH2 Thomas Lorentzson

Letters



Family Friendly

I thoroughly enjoyed your November issue "The Face of the Far East." Some additional notes that make a tour in Japan wonderful is that the society is virtually crime- and drug-free, which contributes greatly to the family-friendly environment.

And the Japanese' good deeds are contagious, too. If you lose something in Japan, whether a watch, luggage, a ring or even a wallet loaded with currency, nine times out of 10, it will find its way back to you intact. Japan is a breath of fresh air!

Gregory Seip
Sasebo, Japan

Apologies

In the "Eye on the Fleet" segment of the December issue, it incorrectly referred to the fallen Naval Academy midshipman, Jason McCray, as James McCray.

MIDN 3/C David Alexander
U.S. Naval Academy

Heady Advice

I was reading the December 1998 issue of *All Hands*, and was amazed to see a picture of two seamen on Page 46 wearing illegal headwear. Those men should have been wearing "cranial" helmets underneath that aircraft! A bandanna does not protect the head in a head hazard area.

Richard A. Markvart
Safety Manager, NAS Oceana

Tell us something we don't know.

Send your comments to:

All Hands, Naval Media Center

NAVSTA Anacostia, Bldg. 168 (ATTN: Editor),

2701 S. Capitol St., S.W., Washington, D.C. 20373-5819

or e-mail: allhands@mediacen.navy.mil

TIME CAPSULE

Thirty-eight years ago, the June 1961 issue of *All Hands* featured several articles commemorating 50 years of naval aviation:

Fifty years of naval aviation: During the last five decades, naval aviation evolved from the Navy's first attempt to launch and land aircraft in 1911 to the advent of supersonic jets and air-to-air missiles by the 1950s.

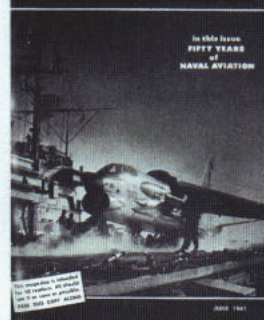
The aircraft carrier: The rise and development of the aircraft carrier revolutionized the concepts of naval warfare. The first commissioned aircraft carrier was USS *Langley* (CV 1). Originally a collier, the Navy converted *Langley* in 1922 and fitted her with a 534-by-64-foot flight deck.

CNO ADM Arleigh Burke once referred to the aircraft carrier as the "nearest thing to an all-time, all-purpose weapon ever devised."

Meet the Navy's missile carrier: Then the Navy's newest aircraft carrier, USS *Kitty Hawk* (CV 63), was described in this article as "a detachable piece of the United States [with] a striking force capable of dealing any kind of blow to any kind of enemy any place in the world."

Our first astronaut: Navy astronaut CDR Alan B. Shepard Jr., blasted off in his three-ton space capsule for an epoch making 302-mile journey over the Atlantic, 115 miles above the earth, at a speed of 5,100 mph. Shepard made history as the first American astronaut in space.

ALL HANDS



Correction

In the January issue of *All Hands*, the "hat/shoulder/collar" devices for warrant officers were pictured in the wrong order. The correct order is pictured below.

Warrant Officers

Chief Warrant Officer



Chief Warrant Officer



Chief Warrant Officer



Countdown to the Millennium



DAYS	HOURS	MINUTES	SECONDS
306	16	29	59

Welcome to "Y2K and You", a brand new column designed to answer your questions about the Year 2000 problem and its potential impact on the Navy. This month we took a look at automobiles, the Navy Federal Credit Union and once again visited with the CNO's Y2K Project Office about other key dates you should know.

Q : I have an account with Navy Federal Credit Union (NFCU). Are they going to be Y2K ready?

A: Officials at NFCU tell us they've been working on the Y2K problem since 1991 and feel sure there will be no disruption Jan. 1, 2000. "We are testing our systems now," said Danielle Mabry, a Savings Telephone Center Unit Supervisor, "and the tests are going great. We intend to be complete by July of this year." According to their website, NFCU has actually been somewhat of an industry leader in regard to Y2K, working with and advising credit union trade associations and their regulator to assist other credit unions with Year 2000 issues.

You can see for yourself at Navy Federal's website at www.navyfcu.org.

Q: I just bought a new car, and it is highly computerized. It even has a built-in navigation system. Is Y2K going to kill it? Will it even start Jan. 1, 2000?

A: For this question we consulted Dave Bettinger, director for Business Solutions for CST2000, LLC, Portland, Maine, and a frequent author and speaker on Y2K issues (check out the December '98 *All Hands* for his article on embedded chips Pg. 7).

Bettinger had this to say: "Gut logic tells me the car will not be affected by Y2K. The use of dates in automobiles

has been largely restricted to reference information rather than decision making. Some models of cars might display the date on your dashboard or overhead as a 'feature,' but few, if any, use a date for running the engine. The dealer doesn't program the date of purchase into your car, so you know it's not going to quit because of any expired maintenance programs."

"On the other hand, there may be a few car models out there that do use a date for evaluating engine performance; it just seems to be highly unlikely. The only sure way to know is to contact the nearest dealer or, better yet, find the automaker's web site if

there is one."

Bottom line: The car is probably safe from Y2K, but you'll want to make sure by doing some research of your own.

Q: I've heard there are several more dates, not just Jan. 1, 2000, that can cause Y2K problems. Is that true and what are they? Why are they a problem?

A: According to the CNO's Y2K Project Office, this is true. The basic Y2K problem arises from a computer's incorrect processing of a date, but Jan. 1, 2000, is not the only date that may cause problems. For instance, consider the date Sept. 9, 1999, (9-9-99). In some older computer languages the code 9999 was used to denote the end of a process or to signal the program to delete certain data. Thus, a Y2K failure could potentially happen in September. As Navy managers continue to address the Y2K problem all these dates are being considered, and many fixes are already in place.

Here are some Y2K-related dates you need to know:

1999-09-09 This date (9/9/99) was popular back in the 1980s as an expiration date for archived data that you wanted to have no expiration date.

1999-10-01 Government's FY00 begins.

2000-01-01 overflows 2-digit years.

2000-10-10 first 10-character date.

2000-02-29 Leap Year.

2019-12-31 Last date Microsoft Excel 95 will recognize.

2029-12-31 Last date next major version of Microsoft Excel will recognize.

2049-12-31 Last date Microsoft Project 95 and previous versions will recognize.

Do you have a Y2K question you would like us to answer? Just go ahead and send it to us. We'll select a few questions every month and seek out the experts for answers. You can mail your questions to:

All Hands Magazine
(ATTN: Y2K and You),
NAVSTA Anacostia, Bldg. 168
2701 S. Capitol St., S.W.
Washington, D.C. 20373-5819.

Or you can send us an e-mail at allhands@mediacen.navy.mil. Be sure to include your name, rate and duty station and don't forget to put the words "Y2K and You" in the subject line.

Around the Fleet

Don't Tread On Me



Command Master Chief, break the first Navy Jack."

With that order from CAPT Jack J. Samar Jr., USS *Kitty Hawk* (CV 63) commanding officer, a unique flag was raised on the ship's jack staff, distinguishing *Kitty Hawk* from all other ships in the U.S. Navy.

Kitty Hawk received the first Navy Jack, a flag consisting of 13 horizontal, alternating red and white stripes with a rattlesnake across the center, bears the motto, "Don't Tread On Me," to designate the 38-year-old aircraft carrier as the oldest ship in the fleet.

In 1977, the Secretary of the Navy directed the ship with the longest total period of active service to display the first Navy Jack until decommissioned or transferred to the inactive Reserve. The flag shall then be passed to the next ship in line with appropriate honors.

One *Kitty Hawk* Sailor said

the flag represents a unique experience in his career. "When I came in the Navy, my first ship was brand new," said Disbursing Clerk Seaman Kason Brizele, of Monroe, La. "Now, here I am on the oldest one. It's a new experience, and I think *Kitty Hawk* is now ready to take part in some big events."

For more information on USS *Kitty Hawk*, visit their web site at <http://www.kittyhawk.navy.mil>

Story by JO1 Mike Morley
USS *Kitty Hawk* (CV 63)
public affairs.

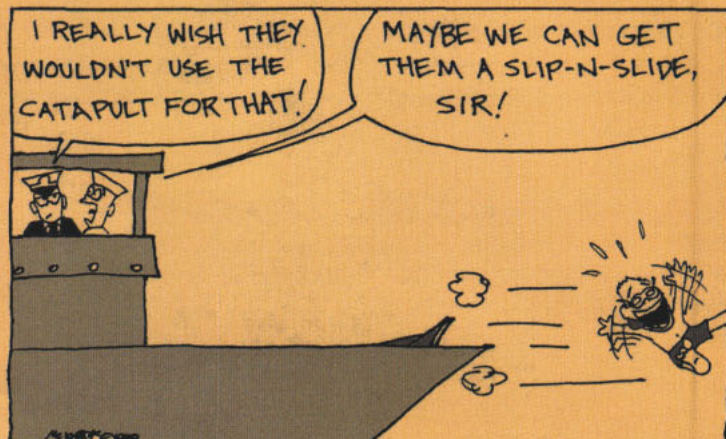
CDR Gary Simons and SR Miguel Gonzalez-Cerva raise the first Navy Jack on board USS *Kitty Hawk* (CV 63). The flag, also known as the "Don't Tread On Me" flag, symbolizes that USS *Kitty Hawk* is the oldest, active-commissioned ship in the U.S. Navy.



Photo by PHC(AW/SW) Mahlen K. Miller

Ricky's Tour

By JO3 Mike C. Jones



Forward Deployed IT-21

USS Belleau Wood (LHA 3) is now better equipped to meet the demands of its forward-deployed status with new cutting edge information technology. The large deck amphibious assault ship recently installed the Navy's new information management system Information Technology – 21st century (IT-21).

"The whole concept is to put up-to-date technology into the hands of the Sailor," said Chief Radioman (AW) Leon H. Slack, who works in Belleau Wood's automated data processing division. "As far as the civilian industry goes, this is what you're going to see."

While crewmembers will reap immediate rewards, the benefits of the new system go beyond a Sailor's tour aboard Belleau Wood.

"This program is forcing people to standardize so they won't have to spend time learning a different software when they leave here and go to a different ship," said Slack, from St. Augustine, Fla.

While the upgrade to IT-21 provides the Sailors aboard Belleau Wood a better working system right now, according to Slack, they will see even more capabilities in the future. "There's so much potential here, so much that we can do, that right now we just don't have time to do it all," he said. "When all the pieces of the puzzle come together, we'll have a very robust system."

By JO1 Daniel Pearson,
USS Belleau Wood (LHA 3)
Public Affairs.

By Master Chief Petty Officer of the
Navy MMCM(SS/SW/AW) Jim Herdt

Speaking with Sailors

AMS3 Phillips, Naval Air Station Barbers Point, Hawaii

Q: When are we going to be able to wear dungarees in town?

A: Currently dungarees and the new utility uniforms are not allowed to be worn in town. Following the transition period, Chief of Naval Operations, ADM Jay Johnson, has plans to revisit the existing policy on the wear of the utility uniform. He has not agreed to change the policy, but to examine it and *perhaps* adopt a policy for the utility uniform that could possibly mirror the policy regarding the wearing of flight suits off-base. I would like to again stress that this is a plan to review the policy, not a promise to enact any changes.

RM1 Rayner, Naval Computer And Telecommunications Area Master Station Pacific:

Q: Will there be another 15-year Temporary Early Retirement (TERA) offered?

A: TERA requests for FY99 have been processed. Currently, there aren't any official plans for another round of TERA in FY00, but it is my hope that it will be available to help us continue "shaping" the force to further enhance advancement opportunity.

RP2 Newton, Marine Forces Pacific, Kaneohe Bay, Hawaii

How will dual military couples be considered for co-location under the JASS system?

A: For co-location assignments, dual military couples do not utilize the JASS system. As in the past, both service members must submit a 1306/7 in accordance with the Enlisted Transfer Manual to request co-location assignments.

Speaking with Sailors is a monthly column initiated by the Master Chief Petty Officer of the Navy as a way of reaching out to the men and women of the fleet, whether they are stationed just down the road or halfway around the world.



Photo by JO1 Robert Benson

Rappin' Robinson

Seaman Jermaine Robinson from Lafayette, La., a mess management specialist stationed aboard USS Abraham Lincoln (CVN 72) and a member of the rap group Trench Town Mafia (a group he formed with some friends before joining the Navy), recently released an eight-cut CD titled, "4 Life," which has been available for about four months in Louisiana.



U.S. Navy Photo

"The cuts on the CD are about things that people do to survive," said Robinson. "Some of it is taken from personal experiences." He said it took almost four years to release the album.

"It has sold about 4,500

copies, and that's pretty good for an unknown group," Robinson added.

MSSN Jerrod Sanders said he enjoys Robinson's rap style. "I can relate to it and visualize what he's talking about," said Sanders. "He has an open mind and uses a wide vocabulary to stimulate his listener's mind. And he doesn't use a lot of profanity."

Asked to compare Robinson's rap style to other rappers, Sanders said, "His style is more laid-back and mellow, but at times he'll change and make it unpredictable and energetic. When he raps he's a completely different person. I think it brings out the best in him."

For more information on USS Abraham Lincoln, visit their home page <http://www.spawar.navy.mil/lincoln>.

Story by JO2 Bob Leach, USS Abraham Lincoln (CVN 72) Public Affairs.

Around the Fleet

Lifesaver

While traveling on Jackson Highway in Washington State recently, PR1 James Murphy of Navy Tactical Electronic Warfare Squadron (VAQ) 134 witnessed a motorcycle accident. The rider was thrown down a steep embankment and into a thorn bush.

The victim was unconscious, not breathing, severely bleeding and suffered a compound fracture to his right arm. Without regard to his own cuts sustained from the thorn bush and the associated, potentially life-threatening diseases, he cleared the victim's airway and

performed CPR while controlling the bleeding. His actions saved the victim's life.

Murphy remained with the victim for approximately 30 minutes until an ambulance arrived on the scene. The ambulance transported the victim to a local school where he was airlifted to Harbor View Medical Center. A week later, the victim was in critical, but stable condition.

Murphy acted quickly without regard to his own safety or protection to save the life of another.

Story by LT John Flynn, VAQ 134, NAS Whidbey Island, Wash.



U.S. Navy Photo
PR1 James Murphy

Instant Credit

Buying groceries with a credit card at the commissary is becoming just as quick and reliable as at commercial stores. The Defense Commissary Agency and Defense Information Systems Agency developed a new system called the Direct Commercial Data Line Backup. More than 20 stores use it. All stateside commissaries should be connected by June 1999 and overseas commissaries by July 1999.

Most commissaries transmit credit card transactions over the information system agency's non-warfighter data network. Commissaries are among that network's larger customers.

"At times, our primary

network can't respond within the seconds required to complete a commercial credit card transaction," said Commissary Agency Spokeswoman Rose Parkes. "That led to credit card downtimes and customer waits of up to several minutes, an eternity in the fast-paced world of commissary checkouts."

"This really is a win-win solution," Parkes said. "Our customers get commercial quality credit card support, and DECA continues to support an important part of our national defense communications infrastructure."

Story by Tim Ford, Defense Commissary Agency Public Affairs

The History of Flight

From the dawn of flight to the exploration of space, the National Museum of Naval Aviation, Pensacola, Fla., is dedicated to preserving and exhibiting the heritage and cutting-edge achievements of Navy, Marine Corps and Coast Guard aviation. It is home to the finest collection of naval aircraft from the past 80 years, including the fragile wood and wire Curtiss *Triad*, the Navy's first aircraft. The museum showcases artifacts, aviation art and photography, models, memorabilia and technology displays. It stands as a monument to naval aviation pioneers and provides inspiration to the hundreds of thousands of visitors each year.

The museum is one of the three largest aviation museums in the world. More than 150 beautifully restored aircraft, equipment artifacts and memorabilia tell the story of eight decades of U.S. Navy, Marine and Coast Guard Aviation.

Located at Naval Air Station Pensacola, the museum presents both an entertaining and educational experience for all ages.

Unusual displays abound: in the Pensacola Blue Angel Atrium, a flight of Blue Angel A-4 *Skyhawks* hang suspended in the team's familiar diamond formation, and in the West Wing, visitors walk the flight deck of a World War II aircraft carrier. You can tour the interior spaces of an aircraft carrier, visit a jungle airstrip manned by combat Marines or launch from a carrier and experience a *Desert Storm* strike mission in the Museum's motion-based flight simulator.

When done with all that, get lunch and a history lesson in the Cubi Bar Cafe. There, all the artifacts recovered from the famous

officers' club at Cubi Point Naval Air Station in the Philippines are displayed in a painstaking reconstruction of the original bar.

The museum recently underwent a \$13.5 million renovation and added an IMAX theater, which shows "The Magic of Flight," the museum's signature film.

The National Museum of Naval Aviation is open every day of the year except for Thanksgiving, Christmas and New Year's. It is free to the public and is the most visited museum in the state of Florida.

For more information on the museum, log onto their website at www.naval-air.org or call (850) 452-3604/3606.

Story by JO2 Brigitte Barnes, a journalist assigned to All Hands.



Photo by JO1 Robert Benson

Visitors to the National Museum of Naval Aviation enjoy the many airplanes and displays.

Pike's Peak

In 1806, when LT Zebulon Montgomery Pike discovered the 14,110 foot peak in the Rocky Mountains that would bear his name, he predicted no one would ever succeed at reaching its summit. Pike's only attempt was thwarted by a cold November storm.

Aviation Electronics Technician 3rd Class Zebulon Montgomery Pike III is a blood relative of LT Pike, who is his fifth great uncle. "When I was in boot camp, my grandmother sent me a long family tree," Pike said. "It had my uncle's name in it. He didn't have any children, but his brother did."

The Golden, Colo., native, serves in USS *Carl Vinson's* (CVN 70) Aircraft Intermediate Maintenance Department. Pike normally services weapons systems on board EA-6B Prowlers from his AIMD in Whidbey Island, Wash. Since his temporary assignment to *Carl Vinson*, he has had to adapt to the systems on board the F-14 *Tomcats*. "I now work on F-14s," he said. "Right now, I'm learning the gear on that plane." According to Pike, the systems between the two aircraft are very different.

When Pike recalls his visits to Pike's Peak, he feels a sense of pride and wonder. "I often think about what my uncle thought when he saw it for the first time," he said. "Pike's Peak is gorgeous. Wherever I go, people always ask me if I'm related to him. It feels good to tell them I am."

Story by JO3 Brian Hess,
USS *Carl Vinson* (CVN 70)
public affairs office.

G Force

By PH1 James R.
Hampshire

In a small cockpit on the end of a centrifuge arm, LTJG Michael Orr, of Hunters Ridge, Calif., keeps a bogey centered in his screen as he circles at a steady 1.5Gs. He whips by the control room window, where Hospital Corpsman 2nd Class (FMF) Rusty Deason, of Pensacola, Fla., intensely watches the video feed of Orr as he coaches him through another run. Tension visible on his face, Deason calls, "Legs" and watches as Orr stresses the muscles of his lower body. Deason follows with a command of "deep breath." As the run is enabled he tells Orr, "Go get 'em!"

In less than a second, the centrifuge accelerates to 5.5Gs and Orr is crushed down into his seat. As blood rushes from Orr's brain, Deason immediately begins coaching him through the run. Calling for Orr to breathe every three seconds, Deason watches his technique and asks questions to judge his mental state. Finally, at the end of the Prowler profile, he calls "Knock it off, knock it off" to an exhausted Orr as the centrifuge slows down.

Deason reminds Orr to keep his leg muscles tense while slowing down, and he has him grab a rail inside the cockpit to help combat the tumbling sensation an aircrewman feels as the centrifuge slows. When it is safe, HM2(FMF) Ari Leon Golabov, of Ocean Township, N.J., helps Orr out of the cockpit, maintaining a steady hold on Orr's flight vest until the disorientation has passed. Later, after Orr has physically recovered, Deason will review the tape of the run with him.

"I love this job," said Deason, an Aviation Physiology Technician assigned to the Aviation Survival Training Center (ASTC) at NAS Lemoore, Calif. "I get great feedback from the fleet. Most of the aircrewmen come out of here saying that they really learned something."

ASTC Lemoore has been tasked with training all tactical aircrewmen in Gravity-induced Loss of Consciousness (GLOC) prevention. GLOC can be caused by an aircraft in a sustained high-speed turn. In such a maneuver, blood rushes down from

the brain, and a person instinctively holds their breath until it passes. In a long turn, that combination causes blackout, which is deadly in flight. The instructors of ASTC Lemoore, teach aircrewmen how to prevent GLOC through maintaining muscle stress in their lower body and special breathing techniques. Then, they take the theory out of the classroom and have the aircrewmen apply the techniques under sustained high G loads.

Under careful supervision, aircrewmen are spun up as high as 8.5Gs while controlling the speed of centrifuge and maintaining an awareness of what is going on around them. Completing a ride in the centrifuge is a tiring experience. "I call it 'The Beast,'" said Deason. "Riding through a 20-minute profile is a full-body workout." He speaks from experience, Deason — like all centrifuge crew chiefs — have to complete a full, five-part profile before they are fully qualified.

"This job is like being a first base coach," said Golabov, another crew chief. "When I'm coaching a pilot through a run, I can really feel the intensity. And after the run, I get good feedback from the pilots. They say it is worthwhile and should be part of the initial training. I really like being an instructor," he added.

Besides the centrifuge, ASTC Lemoore teaches other aspects of aviation survival. They run the 9F2 Parachute Drag Trainer, 9H1 Helicopter Hoist Trainer, 9D5 Underwater Egress Trainer in the water survival section and have a high-altitude trainer as well.

"This is one of the better jobs in the Navy," said Deason "I like working in a very professional environment. Working here also gives us the chance to ride back seat with Strike Fighter Squadron(VFA) 125. That really helps with what we are doing."

Hampshire is a photojournalist assigned to All Hands.

ASTC web page: <http://www.lemoore.navy.mil/astc>



Photo by PH1 James R. Hampshire

Military and civilian members of the Aviation Survival Training Center (ASTC) man the control console during a run.



VP-47 line crew personnel perform a night recovery of the P-3C aircraft.

VP-47's Combat Crew 7 get in full gear as they execute a bailout drill. A ditching and a fire drill were also part of the training flight. It is squadron policy to take advantage of every opportunity to train for such emergencies.



THE BUSINESS OF PROSE



Two VP-47 ground crew personnel examine the landing gear after a routine training flight.

YANKING AND BANKING

CUTTING SUBMARINES IS ALIVE AND WELL AT VP-47

Like an amusement park ride gone bad, the aircraft pitched and rolled as an intense, hot dot of sunlight roamed the interior of the cabin like a prison searchlight. The smell of gunpowder smoke became nauseating as it filled the cabin, while the in-flight technician shoved yet another sonobouy into its chute.

Above the roar of the aircraft's four, 4,600 horsepower turboprops, a metallic thump, like a sledge hammer against a steel bulkhead, meant another sonobouy was fired from the plane's belly with a shotgun shell-like charge. Welcome to the world of the P-3C *Orion*, the mighty hunter of submarines.

Amusement rides can be fun, but not if you're on them for eight hours. Still, Combat Aircrew 7 (one of 11 crews of Naval Air Station Barbers Point, Hawaii-

based Patrol Squadron (VP) 47) wouldn't have it any other way.

The squadron's mission is to provide undersea warfare, surface warfare, intelligence collection, mine warfare, command, control and communication electronic warfare and mobility support to Commander, Patrol Wings, Pacific. VP-4, VP-9 and VPU-2 are also homeported at NAS Barbers Point.

On this day, Combat Aircrew 7 was on a training mission in pursuit of an enemy submarine. The sub they were chasing was actually USS *Buffalo* (SSN 715). USS *Kamehameha* (SSN 642) was the command ship in the exercise.

Tracking submarines requires a great deal of steep banks and maneuvering at low altitude, where turbulence is greater.

"It takes a long time to get used to

sitting sideways on the plane," said Aviation Systems Warfare Operator 2nd Class (AW/NAC) Kevin R. Thompson, Combat Crew 7 sensor 1 acoustic operator. "Sometimes when you're yanking and banking, you'll go from two feet away from the screen to two inches."

"It's fun, and I just enjoy going out there and actually saying you did something for the day," explained the Matton, IL native.

"A bad day of flying is better than a good day in the hangar," agreed Aviation Electrician's Mate 1st Class (AW/NAC) Scott A. Wells, one of Combat Crew 7's two flight engineers. "I particularly like the low altitude, high air speed bombing runs. It's precision work. The flight station (cockpit) crew has to work real close together to keep the plane safe and

it takes a lot of effort and a high amount of concentration," explained the Beaumont, Texas native. That precision is the result of intense training as the VP-47 "Golden Swordsmen." Wells didn't get to be a flight engineer overnight.

"I had to go to air crew school, which is five weeks of training," said Wells. "Then flight engineer school at VP-30 in Jacksonville, Fla., and that's 30 weeks of intensive classroom and in-flight training. Then, search and rescue school and after that you go to the fleet, and it took me about a year to get qualified here."

The typical P-3 crew consists of three pilots, one tactical coordinator, one navigator, two flight engineers, two sonar operators, one electronic warfare operator and one in-flight technician.

Wham! Another sonobouy splashed into the water as the tactical coordinator (TACCO) watched the doors on the aircraft's belly close from his infrared display.

AW3(NAC) Dan Youngblood and AW2(AW/NAC) Kevin R. Thompson, Combat Crew 7 Acoustic Operators, track a submarine during a joint exercise with USS *Buffalo* (SSN 715) and USS *Kamehameha* (SSN 642). "The best part of my job is getting on top of a sub and staying there," said Youngblood.



Sonobouys are directional frequency and ranging sensors that "listen" for targets and transmit the acoustic data back to the aircraft. The acoustic operators monitor the data with headsets and on a multi-purpose display, then pass the information to the TACCO, who then decides where and when to launch the next sonobouy. The TACCO then directs the flight station crew on the proper course for the next launch. The TACCO lays out a pattern of sonobouys to locate and track the target. On a given mission, more than 100 sonobouys could be launched. That's a big job for the in-flight technician who must keep his balance while loading the sonobouy chutes.

"It is a crew aircraft," said LT David Ursini, Combat Crew 7 mission commander and native of Las Vegas. "On station, we're a team. No one person is going to save the day by himself or herself. We live or die on the collective efforts of everybody."



VP-47 line and ground crewmembers signal the flight station crew that the pins are being removed from training weapons, loaded on the P-3C's wing pylons. The training weapons, called "shapes," are filled with concrete but are treated as live weapons.

That collective effort also emerges during the bailout, ditching and fire drills conducted during the training flight. Although the crew could probably zip through the drills with their eyes closed, they have their "game faces" on and take this training quite seriously. However, when Combat Crew 7 gets their hooks on a submarine, they "prosecute" it with a vengeance.

"The adrenaline is going a lot more when you track a foreign sub," said Thompson. "Everybody's hyped up, because you're going out there to track somebody you've never tracked before. There's more of a sense of urgency. You have to stay on top of them and watch what they do. This is probably the most fulfilling job I've seen."

Pursuing submarines is the bread and butter of the 116-foot long, 139,760-pound P-3C. The first P-3V entered the Navy's inventory 36 years ago, and after three upgrades, the P-3C is the Navy's only land-based, long-range, anti-submarine aircraft. It has advanced submarine detection sensors such as directional frequency and ranging

After a 10-hour training mission over Hawaiian waters, a P-3C aircraft passes through the rinse rack, or "bird bath," as it's called by squadron personnel.



(DIFAR) sonobuoys and magnetic anomaly detection (MAD) equipment.

The avionics system is integrated by a general-purpose, digital computer that supports all of the tactical displays, monitors and automatically launches ordnance and provides flight information to the pilots. Additionally, the system coordinates navigation information and accepts sensor data inputs for tactical display and storage. The P-3C can carry a mixed payload of weapons internally and on wing pylons.

As the saying goes, "what goes up, must come down" and back on the ground, VP-47 like all VP squadrons, has an extensive line up of support services. Administrative, command services, operations, maintenance, safety, training and tactics are the primary departments of VP-47.

"Because we are a sea-going squadron, there's a lot more travel and you learn more here than out in the fleet," said Yeoman 3rd Class Peggy A Jackson from Newport, R.I. "When we deploy, we pack up our computers, our office supplies and service records. When we get to our new site we set everything up and we're

up and running. We have almost 400 people in our squadron, we have to write orders for the crews and everyone who's going on the airlift, plus maintenance personnel in case the plane breaks down. We also have to make sure everyone is ready medically and has a government passport. It takes a lot of time, but I've learned more here than anywhere else."

When VP-47 deploys, it's a major undertaking. In January 1998, they relieved VP-4 in Diego Garcia where they assumed peacekeeping responsibilities in the Western Pacific and Arabian Gulf. Many months of careful planning and preparation enabled nine aircraft, 11 crews, and nearly 400 personnel to complete the 9,000-mile, 10-time zone journey to this small island in the Indian Ocean.

Immediately upon arrival in Diego Garcia, six aircrews and five aircraft detached to the Arabian Gulf. Three crews patrolled the Arabian Gulf around the clock for U.N. sanctions while the other three crews detached to Masirah, Oman, where they flew critical patrol missions armed with *Maverick* and *Harpoon* missiles.

VP-47 is also keeping pace with the recent installation of Anti-Surface Warfare Improvement Package (AIP). These cutting-edge enhancements are designed to make the crews' lives easier.

"One of the great features of AIP is that previously, on a typical P-3 you only see a certain function at the tactical stations," said Ursini. "With AIP, the TACCO is able to split his screen so that he can bring up and physically look at the acoustic gram, for example, without getting out of his seat. With the push of the button, he can look at the acoustic gram and the radar while maintaining the tactical plot. It allows him to better manage his assets.

"[The] OASIS [tactical data processor] is an easier way to pass contact information and is linked into the worldwide net," Ursini added. "So literally, if I detect a contact somewhere, then send it to my operational commander via OASIS, he can automatically link it in and can bounce it via satellite to whomever needs to see that info, in real time."

VP-47's Combat Crew 7 has adapted quite well to the changing role of the P-3C aircraft and its new enhancements.

After hours of yanking and banking, the shroud of darkness loomed over the mighty hunter and the hot dot of sunlight was replaced by stars rolling past the overhead windows of the flight station in a dizzying, surreal display.

As the mission drew to a conclusion, Combat Crew 7 had their hands and minds securely engaged in doing what they do best:

Prosecuting submarines.

Goodwin is a photographer's mate assigned to Commander Naval Base Pearl Harbor public affairs office.



During a training exercise, a Navy crew chief observes as a swimmer is hoisted to safety.



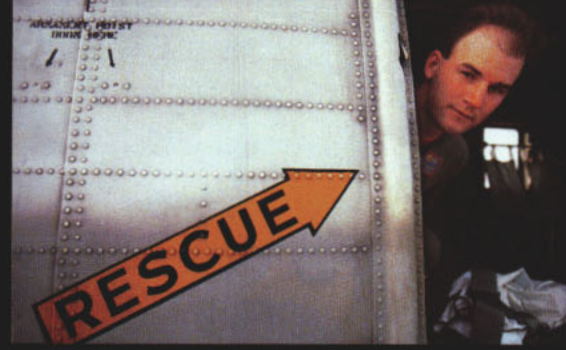
AE2(AW) Eric Weckesser gives the SAR's UH-3H Sikorsky helicopter a once over prior to flight.

SEARCH AN

Fifteen aircrew members make up the Pensacola SAR unit, translating into three teams of five. From left to right, are HM2 Jay Baum, AMH2 Matt Flowers, LT Sandy Roeder, AE3 Derek Catt, and LT Bruce Glasko.



A telling sign points, literally and figuratively, to AE2(AW) Eric Weckesser, a rescue swimmer attached to the Pensacola Search and Rescue team at Pensacola Naval Air Station.



Story and photos by JO1 Robert Benson

D SAVE

Some bubbles, a ripple and drops of blood. That's all that remained one November night two years ago, when two of Norval Nelson's fishing buoys suddenly and mysteriously disappeared from the bay where they were floating outside his Juneau, Alaska home.

Perplexed, he bought two more beach ball-sized buoys and went on with his life.

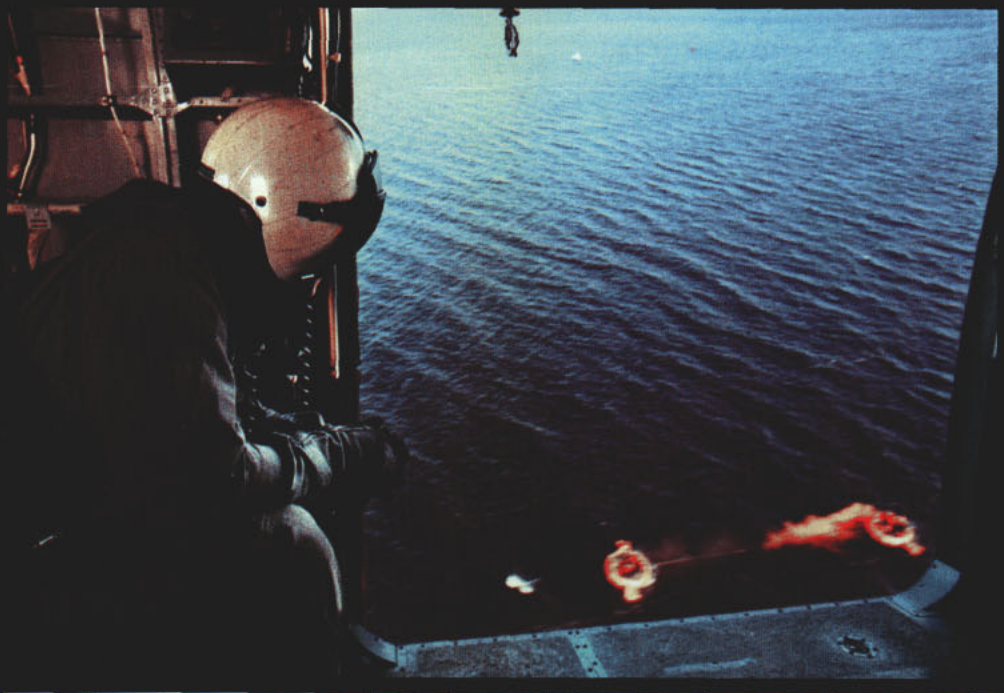
Then, about seven weeks later, he got a long distance call from the Navy in Hawaii (3,000 miles away) saying his buoys were in their possession. Navy officials told the bewildered fisherman that a whale had become entangled in the net attached to the buoy, and dragged it via his tail to Hawaii during its mating run.

They went on to say that a Navy Search and Rescue helicopter had spotted the whale, and subsequently helped free it from entanglement. Quite a whale of a tail, but it's true: fascinating to landlubbers, old hat for Search and Rescue personnel.

Just ask members of the Search and Rescue team, Pensacola, Fla. They've "been there and done that." With nearly 132 years of SAR experience between the 15-member team, there's little they haven't seen.

Search and rescue, known throughout the fleet as SAR, is charged with one simple mission—saving lives. And being adjacent to one of the world's largest naval air stations, the Pensacola SAR team's mission is unique. "On paper the mission of our SAR unit is to support military aviation," said Chief Aviation Structural Mechanic (AW) John Zabelle. "We have all the aviation training wings here in Pensacola, so our whole purpose here is to support them if and when they crash.





If a Navy plane went down, this is what rescue swimmer AE2 (AW) Eric Weckesser would see. This training exercise is a weekly event in Pensacola Bay, run in conjunction with the Aviation Survival Training Center.

"In reality, most of our rescues are civilian rescues like lost swimmers, boats in distress, someone having a medical problem, etc."

One of those rescues unfolded on a dark night in September 1996. At the center of this particular rescue, which we can call "heroism in a hurricane," was Pensacola SAR swimmer Aviation Maintenance Hydraulics 2nd Class Matt Flowers.

He called it the scariest, most difficult and luckiest night of his life; an ordeal that lasted four hours.

Set the scene in your mind by bringing in a gale, the darkness, the thunder and lightning and 20-foot waves.

"We went out to rescue a freighter that was dead in the water near a hurricane," recalled Flowers.

"They were taking on some water. So our goal was to hoist the crew to safety. We lowered one guy to the ship, then they lowered me down into the water, where we were going to rescue the crew using the hoist."

Next he grabbed a survivor who was already in the water and began to prepare him for a hoist to the helicopter.

But the 20-foot waves and 60 knot

winds immediately began moving Flowers away from ship and helo, into the darkness, out of sight.

"I was drifting away, out there by myself," said Flowers. "The helicopter was about 200 yards away but they couldn't see me. I used a strobe, but the helo still didn't see me, so I lit off a flare."

Meanwhile his survivor was clinging to Flowers for dear life.

Pilots finally spotted Flowers and his survivor. Both eventually made it onboard the helo, but not before again being blown out of sight, necessitating the need for another flare light off.

Other, less heroic missions took place around Pensacola last year, a total of 16 SAR missions, which resulted in two life-saving rescues and one medical evacuation. But the countless hours (about 720 of them) they spent in the air in training and assisting the local aviation and water survival schools is where the real story lies.

Every morning they fire up one of the UH-3H Sikorsky helicopters and take to the sky. "As a rule we fly everyday," said Zabelle. With the helo's maximum range of 200 miles in any direction from base, the patrol can extend deep into the Gulf

of Mexico, Louisiana and Florida.

Little blue books, charting the number of hours aircrewman have flown, are strewn around the office. Next to them sit aircraft log books, which track all flight hours logged from birth to death (delivery to the Navy until scrapping).

The SAR team, like most Navy SAR units, consists of two pilots, one hospital corpsman, one flight engineer and one rescue swimmer. Couple that with one awesome piece of machinery and you have a potent rescue machine.

"The helicopter's role in saving lives represents one of the most glorious pages in the history of human flight," said Igor Sikorsky, a founding father in search and rescue and the development of the helicopter. "I have deep respect and admiration for these gallant pilots and crews who perform these flights. Their action, representing considerable skill and courage, equals the most heroic of battle field achievements."

The Navy's proved this time and time again since February 1947, when the first naval helicopter rescue took place. An S-51 helo from the aircraft carrier USS *Franklin D. Roosevelt* (CVB 42) rescued a Navy lieutenant after he ditched his plane in the ocean.

Now, 50 years later, the rescuing continues.

There's a motto in the SAR community, a motto that in four words speaks volumes. That maxim is written on the wall below the Pensacola team's emblem:

"So others may live."

Whales too.

AWESOME AIRDALES

They're four of the most chilling words you can hear underway: "Man Overboard! Man Overboard ..." A shipmate is in distress, or even worse, dead.

Within the first few seconds a Sailor is in the water, there's a group of search-and-rescue (SAR) experts who have one thing, and one thing only, on their mind: rescue a shipmate. Although they hope it never happens, aviation systems warfare operators train for this distressful moment. In a nutshell, they pray for the best but train and prepare for the worst-case scenario.

"Your adrenaline gets up, but you have to keep it down and stay focused," said Aviation Anti-submarine Warfare Operator 2nd Class (NAC) Kenneth Domke, assigned to Helicopter Antisubmarine Squadron (Light) (HSL) 46 "Grandmasters" of Mayport, Fla.

AW1(NAC/AW) Greg Harkrider, also of HSL-46, soaked from head to toe, recounted his AW experiences in between training evolutions at a local Jacksonville indoor swimming pool, as SAR swimmers from HSL-46 and HSL-42 (also homeported in Mayport) worked together on different rescue techniques. They practiced hoisting maneuvers and worked on techniques to reach a victim tangled in a parachute. First-aid training was also a high priority.

"Training is all geared to going to sea, getting ready for the real thing," said AW2(NAC/AW/IUSS) Mark "Pokey" Richards was, a no-nonsense, business-like HSL-46 Sailor. Richards understands and accepts the demands of his job. "My mindset is that I have to be ready at all times [at sea or in port]," Richards said during a three-hour training flight over Jacksonville, Fla. "We could be called on a job at any time." As the flight begins, Richards checks a bank of electronics gear inside the tight confines of the SH-60B helo while conferring with his pilot and co-pilot. "[Training] is serious business, a matter of life and death," said Richards. "The pilots trust me to do what I have to do."

Besides training to rescue victims from the oceans and high seas, AWs also play an integral part in tracking submarines and identifying and tracking "contacts" many other types of ships and boats, including potential drug-runners. Members of the close-knit AW community are assigned to helo (HS and HSL) squadrons, patrol (P-3) squadrons and tactical support centers on board aircraft carriers and overseas assignments such as Diego Garcia; Keflavik, Iceland; and Sigonella, Italy. All AWs are trained to track subs with highly sophisticated radars, monitors and acoustic equipment, and those assigned to helo squadrons are qualified SAR swimmers.

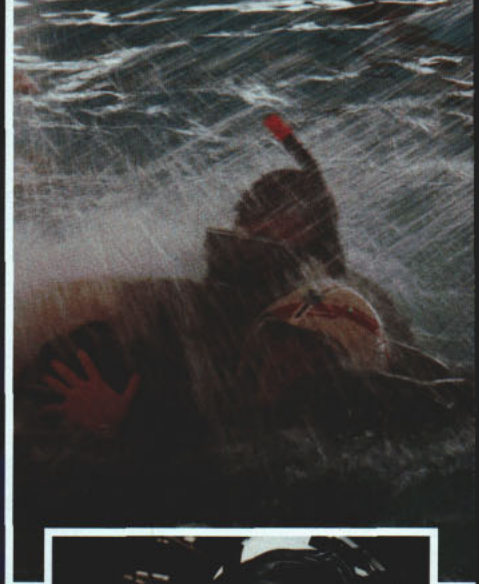
True to form, the SAR swimmers of HSL-46 are a tight-knit group, and it helps them accomplish their mission, according to Richards. "We are close ... like a family," he admitted, "because we've all been through the same training. We have to depend on each other."

According to each member of HSL-46, teamwork, training, camaraderie and trust are essential ingredients in facing the obvious dangers of operating in unaccommodating conditions such as high winds, rough seas and low visibility.

"It's very demanding, physically and mentally, to hook someone up and get them ready to be pulled up," said Richards. "But you've got to think that you'll make it," he said. "It's a mental challenge. There's not one time [I go on a mission] I don't think, 'This could be the last time I'll fly,'" he said. "But it's overcome through training."

The three-hour flight aboard the SH-60B helicopter is coming to an end. It's been routine. Richards has trained on his acoustics and radar systems, worked on different search-and-rescue scenarios and monitored an array of circuit breakers. The pilot gently lands the helicopter. Richards departs the bird and heads across the flight line, satisfied with a job well done. "Flying in a helo is amazing, and I enjoy what I'm doing," he said. "I never imagined I'd be doing this," said Richards, "but now that I'm here, I can't imagine doing anything else." Then he disappeared into the hangar.

Hart is a journalist assigned to USS John F. Kennedy (CV 67) public affairs office.



Top: Rescue swimming is an important part of a SAR swimmer's rigorous regimen.

Middle: AW2(NAC) Joe Lipiec, a Waterford, Mich., native, performs a daily inspection of fluid levels on an SH-60B helicopter.

Bottom: AW2(AW/NAC/IUSS) Mark Richards inspects his HEED (Helicopter Emergency Egress Device) before going on a flight.

S I L E N T

Sentinels

Story and photos by JOC Robert F. Pailthorpe

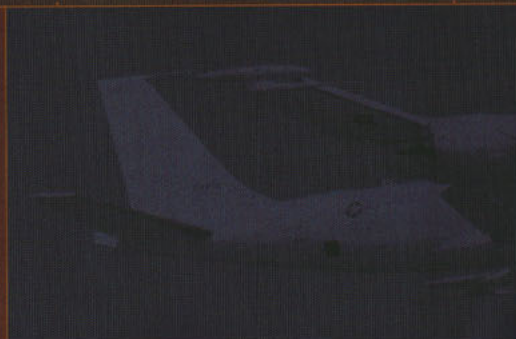
Little known and sometimes forgotten is a collection of seven Navy commands headquartered aboard an Air Force base in the middle of America. These units combine to form Strategic Communications Wing 1 or TACAMO, for "Take Charge and Move Out."

Anchored aboard Tinker Air Force Base just outside Oklahoma City, 1,200 Sailors carry out the day-to-day TACAMO routine, a Navy one-of-a-kind mission. There are two operational TACAMO squadrons: Fleet Air Reconnaissance Squadrons 3 and 4. Both fly the E-6 *Mercury*, a modified Boeing 707 airliner. TACAMO's mission is one of strategic communication, and strategic command and control.

A *Mercury*'s crew consists of about 14 aircrew and six others that make up a battle staff. "Sailors generally fly a 10-hour mission during which we communicate with submerged ballistic missile submarines, Air Force bombers and intercontinental ballistic missile (ICBM) silos," said Senior Chief Radioman (AW/NAC) Gary L. Fravert, airborne communicator supervisor. A typical mission deployment lasts about two weeks and may take a Sailor to any number of places around the world.

"We're the voice of the President," said RM2(AW/NAC) Sven Berglowe, airborne communicator. "It's our job to relay the President's desires and orders as needed. While not many in the Navy know about our existence, we really do a crucial job." TACAMO is one of the very few places in the entire Navy where aircrew-qualified radiomen are found.

In addition to its squadrons, TACAMO also trains its enlisted



AT1 Francis S. McHale, flight technician, checks the relays on the Mercury's VHF Communication Subsystem.



and officer students at two separate training commands, the Naval Training Support Unit and Naval Aviation Maintenance Training Detachment 1080. Both commands boast multi-million dollar state-of-the-art computer-based training programs and scale aircraft training compartments to simulate in-flight routines and emergencies. Two high-tech flight simulators round out one of the Navy's most-advanced training programs.

The Mercury crew communicates with its customers through use of a very low frequency (VLF) antenna system. As the aircraft flies at a 25 to 40-degree bank in what is known as an "orbit," and just 10 mph above stall speed, up to five miles of cable are released from the rear of Mercury to relay presidential directives. The orbital pattern can be flown for up to six hours.

"My job is important and rewarding. If for some reason we couldn't deploy our antenna, then we couldn't complete our mission. That's why I take what I do seriously and do it with a lot of pride," said Aviation Machinist's Mate Airman Ileana R. Munoz, reel system operator.

To support the squadrons and training pipeline, TACAMO also boasts a Navy communications station, personnel support detachment and Wing Command Staff. Originally stationed at both



AD1 Bradley D. Stratton Jr., flight engineer, performs a pre-flight inspection on an air probe underneath the E-6 Mercury.

coasts, the squadrons were consolidated aboard Tinker in 1992 providing one central location for training, administration and mission. In addition to the commands at Tinker, TACAMO has detachments at Travis Air Force Base, Calif.; Offutt Air Force Base, Neb.; and Patuxent River Naval Air Station, Md.

"I love it here," said Aviation Structural Mechanic 3rd Class Chad M. Beck, air frames division. "The Air Force facilities are outstanding, the best I've ever seen. And being the only Navy in town for hundreds of miles we truly are unique ... the community really likes and supports us. A lot of times people want to know what the Navy is doing in Oklahoma. That makes us feel even more special."

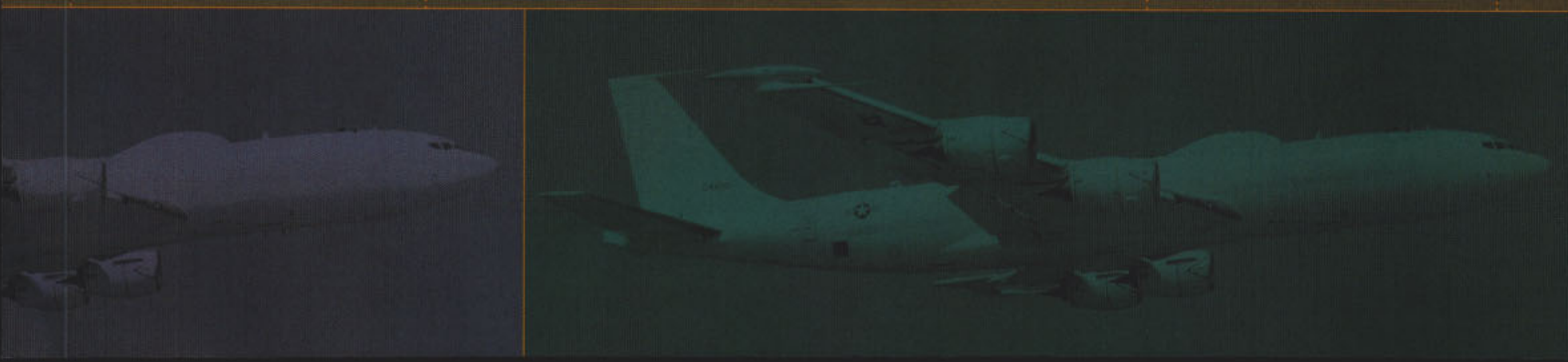
A mission area born in the Cold War, TACAMO Sailors continue to carry out their mission of strategic communication, command and control. From America's heartland, the little known

and sometimes forgotten silent sentinels forge ahead to protect the nation's interests around the world.

Pailthorpe is the assistant public affairs officer assigned to TACAMO's Strategic Communications Wing 1.



Air Framer AMS3 Jerry K. Allchin delicately drills a hole through the flap of an E-6 Mercury to begin a minor repair.



FLIGHT DECK

COOP

Story and photos by JO1 Ron Schafer

Airman Apprentice Mark A. Cate is one of the Navy's finest. He keeps things moving smoothly and safely at one of the most dangerous "intersections" in the world.

Nearly two years out of high school in Phoenix, Ariz., Cate is an aircraft director for V-1 Division aboard USS *Harry S. Truman* (CVN 75). As a "yellow shirt", he is responsible for directing the movement of aircraft on *Truman's* flight deck, a flight deck that has aircraft landing, launching, loading, unloading and taxiing simultaneously.

Add the hundreds of people on deck tending to those aircraft, and it becomes

clear that Cate's job of directing these multi-million dollar machines through this maze is not an easy one. Not bad for someone who stepped on the flight deck less than six-months ago.

Prior to *Truman's* commissioning ceremony July 25, 1998, training on the flight deck was limited. Crewmembers practiced moving a pair of aircraft (minus the engines) to get some experience working with tow bars, tractors and the elevators. Meanwhile, Cate was temporarily assigned to the mess deck, anxiously awaiting his chance to get to V-1 before the commissioning.

"The first time I went up to the flight deck, I just went, "Wow!" said Cate. "My

head was constantly on a swivel. I went up to Vulture's Row and watched the launches and recoveries. It was the first time I actually saw it with my own eyes on a ship!" Finally, the time came. Cate donned a cranial helmet and reported for duty with V-1 Division.

"At first, we only had about five aircraft, then we started getting more and more," he said. "We were doing carrier quals so it was a much faster pace. As soon as one would come in and land, the plane would be fueled or brought right up to the catapult and get shot off. It was a lot different than what I expected."

As she steamed through the Caribbean, *Truman's* flight deck was operating at full





In his environment, AA Mark A. Cate keeps things moving smoothly and safely on the flight deck of the *USS Harry S. Truman* (CVN 75). Nearly two years out of high school in Phoenix, Ariz., Cate is an aircraft director for V-I Division aboard the Navy's newest aircraft carrier.

throttle. F-14 *Tomcats*, EA-6B *Prowlers*, C-2 *Greyhounds* and F/A-18 *Hornets* litter the deck. Some are being fueled; some are prepared to launch. Others take the wire as they hit the deck, or have last-minute checks performed to insure they make that all-important sortie.

Among all these aircraft, their engines humming, whistling, burning and roaring, are literally scores of men and women outfitted in every color of the rainbow – red, yellow, green, blue, purple, brown. Even the shimmering silver of a team of firefighters stands out among the haze-gray backdrop created by a horizon of aircraft and non-skid. Throw in a fleet of yellow tow-tractors and generators, red fire

bottles, and what seems like miles of black fuel lines, and you have, possibly, the most hazardous working environment in the world.

This is Cate's new home.

"It's a whole new world,"

Cate said. "With the list of the ship, you've got to have the pilot come up on power or you have to slow him down. You've got to watch how fast he's going. You need to know where to park him because you can't park the main mounts and the tires on the catapult tracks because they get so hot. You learn all the different spots, all the different scenarios."

Cate took a deep breath and explained that the pace doesn't ease up just because the sun goes down.

"Night time is a real big deal. Certain aircraft like the *Prowler*, you have to stand so far away because the cockpit is so high that the pilot has to be able to see you. And when you're on the catapult directing him up, it's tough. You can't see very well because of the shadows, and you've got the amber lights

shining in the face. You're looking back and hoping that you're doing it right. If you get pushed back, it's terrible. That just makes you look bad."

Any pilot will tell you that these young "yellow shirts" are in charge on the flight deck. That means, in charge of aircraft, and equipment, but most important, people – shipmates. According to Cate, safety is the first thing young airmen are taught. The concept is stressed repeatedly until it becomes first and foremost in their minds.

Whether during cyclical ops when aircraft are coming and going, carrier qualifications that can keep handlers on

deck for hours at a time or a solo COD (carrier onboard delivery) hit that involves just one C-2 *Greyhound*, safety is the cornerstone of everything that occurs on the flight deck. That responsibility is something Cate takes very seriously but in stride.

"You've got to stay focused all the time, but you can't afford to get stressed out and not have fun," Cate began. "Having fun is one of the great parts of this job. I get up there and I nod to the pilots and give them a thumbs-up when things are going good. But, if it's not going good, I'll grit my teeth and go, 'Dang,' but it will go better the next time. Stuff is going to happen. That's part of the job. The responsibility on that flight deck is enormous.

There's just a lot of growing up you have to do up there."

Sure, all work and no play makes Jack, or in this case Mark, a dull boy. But, aboard a carrier at sea, time for play is tough to find. When the opportunity to relax comes, Cate is usually back to the books, preparing for the next advancement cycle, hoping to become a aviation boatswain's mate (aircraft handling) 3rd class. So, where's a cop when you need one? Probably launching yet another *Tomcat* off *USS Harry S. Truman's* bow as darkness falls over the Caribbean.

Schafer is a Norfolk-based photojournalist assigned to All Hands.



THE FLIGHT

Photo by LT Mike Lent



YELLOW SHIRTS

Yellow shirts are an aircraft carrier's traffic cops. Mostly officer and senior enlisted, they call the shots during the moving, launching and landing of aircraft on the flight deck using a series of hand gestures to communicate with pilots and other flight deck personnel.

Photo by PH1 James M. Williams



WHITE SHIRTS

Several different jobs are represented by white shirts. The safety team, air transportation crew, landing signal officers, flight deck corpsmen and final checkers all wear white jerseys on the flight deck.

RED SHIRTS

Whether it's mounting bombs and missiles onto jets or battling a blaze on the flight deck, red shirts work with firepower and explosives. Ordnancemen are responsible for loading, removing and transporting bombs; crash and salvage crews are the ready-response flight deck fire-fighters; and explosive ordnance disposal members jettison defective ordnance.



Photo by PH2 Michael W. Pendergrass

GREEN SHIRTS

Green shirts make up catapult and arresting gear crews as well as aircraft maintenance personnel. The catapult crew ensures the pilot and plane have a good hook-up on the aircraft for a safe launch. The arresting gear crew maintains and operates the gear that "catches" the aircraft.



Photo by PH1 James Williams

O | T | H | E | R | J | O | B | S



Photo by PH2 Shawn Eklund

The Air and Mini Bosses maintain a bird's-eye view of all aspects of flight operations.



Photo by PHAN Paul S. Hobbs

An arresting gear officer verifies the ship's arresting gear is properly set for approaching aircraft.



Photo by PHAN Brian Fleake

The handler controls all movement of aircraft on the flight deck from flight deck control.



Photo by PHAN Johnnie Robbins

Aircraft maintenance maintains and fixes aircraft assigned to their respective squadron.

HT DECK

Photo by PH2 James H. Watson



PURPLE SHIRTS

Known throughout naval aviation as "grapes," purple shirts are an aircraft carrier's gas station attendants. They fuel and defuel aircraft before, during and after flight operations from fueling terminals throughout the ship and test the fuel for purity.



Photo by PHOS Jon C. Sweeney

BROWN SHIRTS

Brown shirts "own" individual planes on the flight deck. Called squadron plane captains, they ensure their aircraft are properly inspected and serviced before and after each flight.



Photo by PH1 James Williams

BLUE SHIRTS

Blue shirts move planes around the flight deck and hangar bays. They drive tow tractors, operate and maintain aircraft elevators and chock and chain aircraft securely to the deck.



Photo by PHAN Chris Howell

The **air transport crew** loads and unloads air cargo and passengers.



Photo by PH2 Alan Warner

The **shooter** is responsible for catapult ops and gives the final launch signal for each aircraft.



Photo by PHAN Timothy C. Ward

The **crash and salvage crew** fights aircraft fires on the flight deck.



Photo by PH3 Nathan L. Guilment

Flight deck corpsmen respond to medical emergencies on the flight deck.

Story and photos by JO1 Robert Benson

I BELIEVE

I CAN FLY

Quick, hold your breath as long as you can.

Now start silently counting. Ten seconds? Twenty? Thirty? How long before you start to feel numb and nauseous? Forty?

According to a small Navy unit down in Pensacola, Fla., that tracks such obscure things, the average E-4 can hold their breath for only 15 seconds. Of course their test subjects are blindfolded, weighted down with flight gear and dunked underwater in an inverted fuselage.

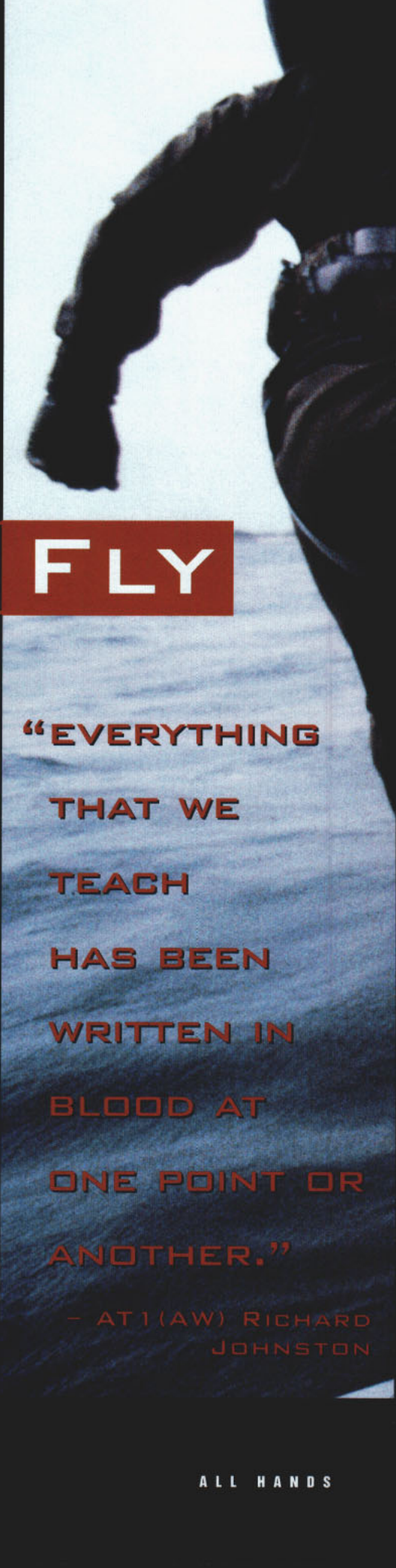
Here's another meaningless exercise: When ordered to do so, think of a joke and recite it as fast as you can. With stop clocks clicking, the same Pensacola team found it takes the average Sailor about 10 seconds. You and I could probably do it quicker, but the Sailors in Pensacola would be disorientated, somewhat hysterical, cold, wet, suffering from dehydration and sunburn and wouldn't have eaten in, oh ... three weeks.

There are reams of similar statistics that prove that grown men go a little

berserk under life-threatening conditions. None of those stats are written down; they're stats taken from real-life experiences, survival accounts and diaries of the dead. These stats are engraved in the minds of Sailors who make up a command known as the Aviation Survival Training Center based at Pensacola Naval Air Station.

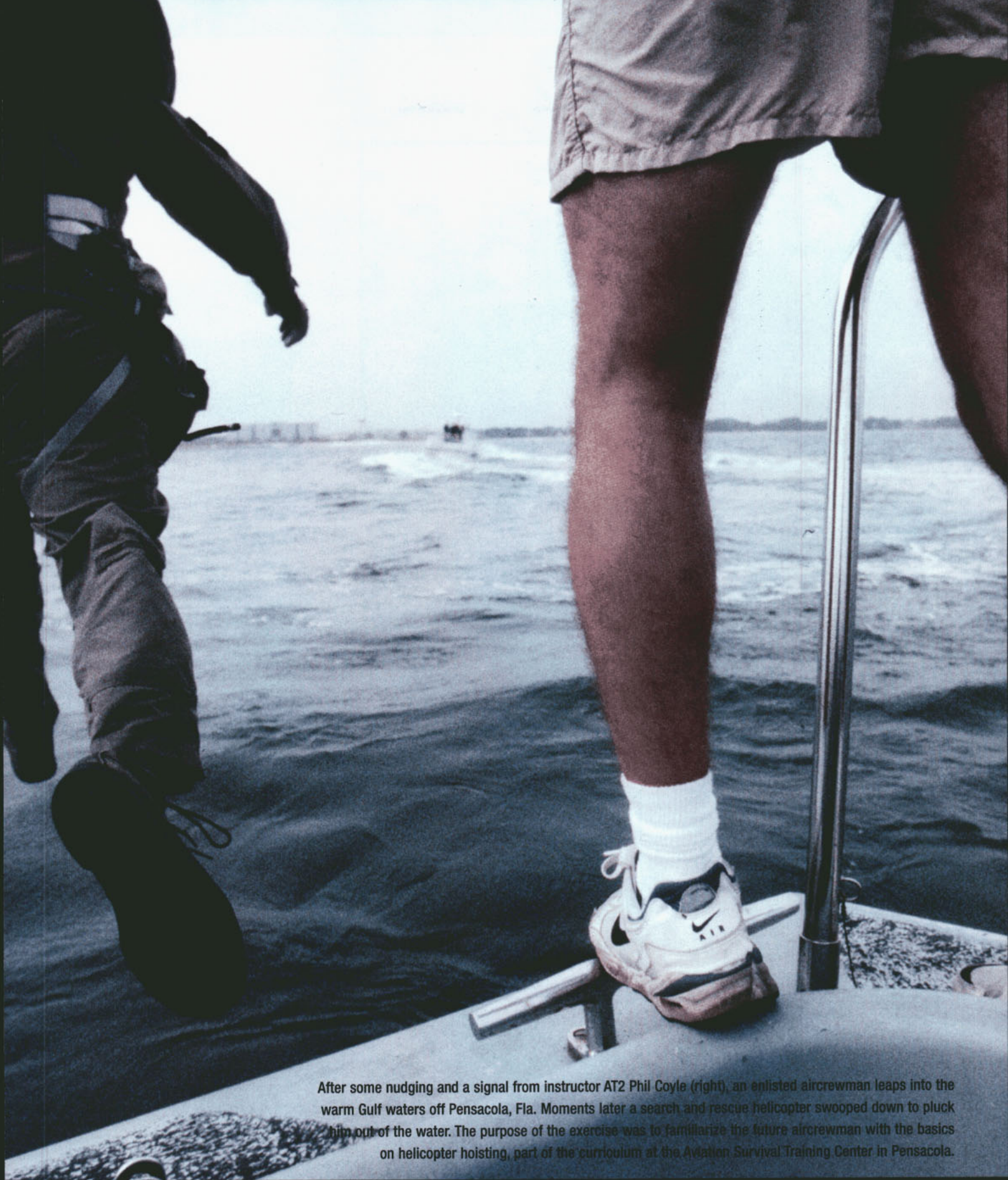
Ask one of those Sailors an obscure question like "What's the biggest threat that faces three men in a life raft at sea?" and you'll get the simple answer: "Themselves." Ask an instructor how to keep the morale up in a life raft when your shipmates are dying around you. The remedy there: "Start telling jokes." Quickly though; the clock is ticking...

In existence since 1947, the mission of the Naval Operational Medicine Institutes Survival Training Center is as clear as its name: to train aircrewmembers, officer and enlisted alike, how to survive through a plane wreck by egressing from a sinking fuselage and



**"EVERYTHING
THAT WE
TEACH
HAS BEEN
WRITTEN IN
BLOOD AT
ONE POINT OR
ANOTHER."**

— AT1(AW) RICHARD
JOHNSTON



After some nudging and a signal from instructor AT2 Phil Coyle (right), an enlisted aircrewman leaps into the warm Gulf waters off Pensacola, Fla. Moments later a search and rescue helicopter swooped down to pluck him out of the water. The purpose of the exercise was to familiarize the future aircrewman with the basics on helicopter hoisting, part of the curriculum at the Aviation Survival Training Center in Pensacola.

Anxiety, nervousness, excitement and stress show on the faces of these young aircrewmembers prior to getting in a fuselage that will simulate an aircraft crashing into the ocean.



surviving in the water.

The course is a prerequisite for all Navy personnel who work in and around aircraft. The school starts aircrewmembers at ground zero – quite literally – when the plane hits the water. During the one-week curriculum, students are subjected to all the horrors associated with an air wreck at sea: escaping from a sinking aircraft, surviving on limited food and water, living off the environment, protecting against the sun, finding land, etc. Even rogue warrior stuff like shark attack or jelly fish evasion is thrown in.

Rightly so – instructors at the school proudly acknowledge that the curriculum is considered high-risk training and extremely stressful.

“This is the closest you can get to a real plane crash,” said Instructor Boatswain’s Mate 1st Class (DV) David Francis, describing training and the Multi-Place Helicopter Dunker, a cornerstone training device that much of the course centers around. The dunker, a big blue barrel-looking container the size of a Volkswagen, is loaded with blindfolded crewmembers and dropped from 10 feet into a deep pool. Its purpose: to simulate a helicopter crashing into the ocean. After hitting the water, the dunker

It's hard not to spot this instructor, PR3 Gayle Strahl, as she demonstrates how to use a flare.





Working together, two enlisted aircrewmen struggle to get atop a life raft prior to inverting it to its normal position.

Crooked helmets, blackened-out goggles, flailing bodies are the telltale signs of aircrewmen experiencing the dunker, a Volkswagen-sized barrel that's dropped into a deep pool to sink while crewmembers inside struggle to escape.



immediately starts to sink and slowly turns upside-down.

Add the cotton candy, kids and screams, and you have a Disneyland "E" ride. The only difference is that here, there's no guarantee of a safe return. Every now and then a young crewmember in the dunker will salute classmates watching from poolside as he or she valiantly goes down with the "ship." Others just cling to whatever they can as the water line quickly rises from their knees to their waist to their chin and higher. The dunker and its crew inside sink, a few tense seconds pass, then heads start to submerge. First one, then another, then another and another. Soon all who went down are on the surface, gasping for air.

Underwater the scene is different: in a controlled frenzy, seat belt buckles are undone and the non-seeing crewmembers feel and grope for the door to escape the dunker, bumping and flailing the whole way. Politeness and the "ladies first" theory is discarded when you can't breathe.

"If something were to happen out at sea, it's going to be dark," said Instructor Senior Chief Engineman (SW/DV) Richard Wrenn. "You're not going to be able to see and your aircraft is going to be in a million pieces around you. The realism of this training is one thing that surprises most of the students who go through our class."

But the dunker is about 99.9 percent safe say instructors – they haven't lost anyone yet.

"If Bob Hope can do it, anyone can," admits Francis, citing notables who have experienced the dunker. He said Barbara Mandrell, Navy astronauts, CNO Jay Johnson and many flight admirals have taken the plunge – they, along with about 6,000 graduates per year – all hitch free. "Students feel much more confident in the water and they feel like they could survive an aircraft crash," he said. "Most of the students

think our training is the most important information they'll ever receive.

Getting a rescue from a helicopter would be the next logical step after your aircraft crashes in the ocean. So, in the following days, students are shown how to get hoisted from a helicopter in a simulated helo hoist. They're also given instruction on how to free themselves to avoid parachute entanglement and dragging."

A half-mile down the road from the dunker building, life raft organization is taught by a different group of instructors in the bay. Parasailing for naval aviators (which teaches pilots how to safely eject and land from an aircraft), and an actual helicopter hoist are also on the curriculum.

"We get them out in the bay and put a team on a life raft," said instructor Aviation Electronics Technician 1st Class (AW) Richard Johnston. "We put a person in charge and drill them on what they would do if they were really in peril. God knows where they could be when they go down for real. What we do is very short compared to what actually could happen. Mostly what we teach is common sense stuff."

Johnston added that students find the course teaches them things they really don't think about. "Going through the Aviation Water Survival School really opens their eyes. From here the students are ready to go on to their prospective school or commands better prepared and better aware of the whole phase of aviation physiology training."

Perhaps the strongest testament of the school's human survival mission comes from Johnston, who claims that everything they teach "has been written in blood at one point or another."

The reference material he and other instructors use – the training manuals, the sea stories, the legend and lore – it all came from one precious source:

The diaries of the dead.

Benson is a photojournalist assigned to All Hands.

WHO'S GONNA JUMP FIRST?

Being first. It always seems to be a big deal for Sailors. Whether it's an accomplishment as big as a ship completing deployment work-ups, a squadron getting the latest equipment for their birds, or even as small as being at the head of the chow line in the galley, Sailors are always competing to be first.

Untested aircrew survival equipment is the order of the day for the Navy's ultra-elite unit of test parachutists.

Story and photos by JO1 Rodney J. Furry

But what about the first in a new line of parachutes? Picture this: it's the smallest, lightest, most reliable parachute ever designed for Navy aircrews. The designers have calculated its performance exactly and used all of their safety expertise, so there's probably nothing to worry about. But no one's ever actually tried it out. So, who's going to be the first to jump?





(left) Packed into the aircraft, the test parachutists wait quietly while the small plane climbs to altitude.

(center) PR2(AW/FPJ) Jonas Williams lands with a rucksack trailing behind him for a test of the MT1XS system used by Navy special warfare units.

(bottom) Test Parachutists PR1(FPJ) Ronald "Taz" Clark and PR2A(PJ) Misty D. Warren test space shuttle emergency systems for a water landing at the NASA training facility in Houston.

Stepping up to the challenge and accomplishing firsts for more than 50 years is the small fraternity of Sailors called Navy Test Parachutists. From their spaces at Naval Air Weapons Center, China Lake, Calif., they test and evaluate all of the new parachute systems designed for naval aircrews. The team is made up of Aircrew Survival Equipmentmen, or Parachute Riggers as they're commonly known. But they're not your typical PRs.

After getting their jump wings at the Army's Basic Airborne School at Fort Benning, Ga., they attend the Advanced Free-Fall school in Yuma, Ariz., where they learn to use specialized systems common to the special warfare community. But that's where the training really begins.

"Before being qualified as a Test Parachutist, we have to jump with every parachute system the Navy has. That way we're familiar with their characteristics and can provide feedback for possible improvements," said PRCS(AW/FPJ) Robert F. Smith, a senior jumper whose relationship to one of the founding members of the Navy Parachute Experimental Unit in the 1920s makes him the program's only legacy jumper.

For almost as long as Sailors have been flying, they've been taking parachutes up with them because military flying is inherently dangerous. A Navy parachute training school had been in existence at NAS Lakehurst, N.J., since the early 1920s, but it wasn't until the outbreak of World War II and an incredible boom in military aviation that the program was moved to California, originally at Naval Air Facility El Centro, and finally in 1979 to the quiet desert outpost at China Lake. Since its birth, members of the program have made more than 50,000 documented jumps, and continue to make as many as 180 to 200 jumps a year.



Photo Courtesy of NASA



The sun is shining clear and hot on the desert floor, but at 12,500 feet over the Indian Wells Valley, it's freezing cold in the small airplane because the door is open and the jumpmaster is about to give the signal for PR2(AW/FPJ) Jonas Williams to go. He's jumping the MT1XS parachute system that's common to Naval Special Warfare units.

"When we jump with this system, we carry a full combat load with a rucksack and a weapon, so we can put the rig under the same stresses it would have to endure in an operational situation," he said.

With a full rucksack slung behind him, he swings out the door and hangs on, fearlessly awaiting the jumpmaster's signal. With a tap on the shoulder he lets go, falling backward into the





Photo Courtesy of NASA

(left) Some of the Navy's first test parachutists prepare for a jump from a dirigible circa 1940.

(top) Test Parachutists PR1(FPJ) Ronald "Taz" Clark and PRAA(PJ) Misty D. Warren suit up for a flight test of the space shuttle's personal parachute assembly.

(right) PRAA (PJ) Misty D. Warren models the new "thin pack" design emergency parachute being tested by the unit. The parachute, which is still being tested is expected to be an improvement on the systems being used now in all of the Navy's prop-driven aircraft.



open sky. The tiny airport and drop zone more than 12,000 feet below quickly begin to grow larger, as he screams back to planet Earth at up to 120 miles per hour. Cutting through the air at hurricane speed, he notes on his altimeter that he's reaching his predetermined pull altitude. He tosses a small drone parachute from his rig and with a violent *WHOOSH!* His chute is ripped from the pack and he's jerked instantly into a fast, gliding swoop over the drop zone.

"Sure, it's dangerous work," said Williams, "but we train constantly to be expert in these systems. We know our safety limits, and we respect them."

With a kidding nod, he joked, "Besides, if something does go wrong during a jump, you've got the rest of your life to figure it out."

While they may be prone to the same dark humor typical of Sailors in dangerous jobs, safety for Navy airmen is the Test Parachutist's purpose in life. With a long list of responsibilities that include testing new and existing parachute systems and writing and editing service manuals for the fleet, they're dedicated to improving the chances for survival for those shipmates who may have to bail out of or eject from a damaged aircraft.

There's no doubt in Aviation Antisubmarine Warfare Operator 2nd Class (AW/NAC) Mark Wendell's mind that the parachute in his ejection seat saved his life. Last March, while his pilot was conducting training maneuvers off the coast of Southern California, something went wrong in the S-3 *Viking*. With only seconds to prepare and the ground hurtling perilously close, he and his fellow crewmembers were catapulted from the *Viking* like rockets. With his superior Navy training and natural instincts intact, his first reaction after regaining his senses was to look up and check on his parachute.

"I thank God every time I think about it. I looked up to make sure I had a good canopy, and I was relieved to know it worked," said Wendell. "It's a comforting feeling knowing that when they do their job, it's going to save somebody's life," he said.

It's ironic how Sailors like the Test Parachutists crave it, always longing for their next jump from a perfectly functional aircraft, while others who fly with it every day pray they never have to use it. But it's fortunate for all of the Navy's airmen that they're willing to take the risk to ensure our pilots make it safely home regardless of what happens in the air.

Furry is a photojournalist assigned to All Hands.



WAITING IN

Tomcat Maintainers Are Heroes

When it launches off the deck of an aircraft carrier, it is the most feared fighter in the sky. The roar of its engine is unforgettable. It is the most storied aircraft in the world today, a veteran of countless sorties in peacetime and conflict, and popularized in novels and on the silver screen. It is the F-14B *Tomcat*, and it is the backbone of naval aviation.

But, below the flight deck or alongside the flight line, this all-weather, day-night fighter is no different than the vehicle you take to and from work each day — it requires upkeep. Enter the Sailors who keep this bird of prey in the air — heroes waiting in the wings.

With its sophisticated weapons, tracking and communications systems, as well as two powerful turbofan engines with afterburners, the F-14B *Tomcat* requires the talents of a diverse group of ratings. At Fighter Squadron (VF) 143,

Naval Air Station Oceana, Va., the entire maintenance department is committed to one concept to keep their aircraft up and flying: teamwork.

As an Aviation Ordnanceman, First Class (AW/SW) Mark B. Raye is responsible for the upkeep of the armament systems on the *Tomcat*. Having worked on F-14s for nearly 10 years in squadrons from Virginia Beach to Atsugi, Japan, Raye said he enjoys working on the aircraft but realizes that it takes hard work to keep a bird up, especially during a deployment.

"It's very high tempo," Raye began. "Getting ready in the morning, we may

have a 6:30 a.m. go where we have to really scramble to get things done. Sometimes we fall behind; sometimes we're ahead of the game. A lot of times there are little things that jump up and bite you, like little gremlins. Those are the things that make life hard for us because then we have to jump through hoops to get things done right. But, I love the job. I wouldn't trade it for anything."

Taking responsibility for a multi-million dollar aircraft is one thing. But, the Sailors who work on fighters, or any other aircraft, also realize that they have a responsibility for the safety of their pilots and aircrew. Aviation Structural Mechanic (Safety Equipment) 1st Class (AW) Gary G. Zimmerman of Long Valley, N.J., is the leading petty officer for VF-143's ejection seat shop. Handling safety and survivability issues for the



THE WINGS

of the Hangar Bay

By JOI Ron Schafer

aircrew, he knows first-hand about the bond of trust that forms between aircrew and maintenance personnel.

"We create an environment in the cockpit," he said, "for their safety during the flight. By knowing that we take our responsibilities seriously, they are able to trust us with their lives. If anything was to go wrong with the aircraft, they need to know that our ejection seats are going to get them out before they go down. I think the aircrew have a little more confidence and respect for us, because they know that the job we do has to be perfect every time. And we take a great deal of pride in our work. We know that

if everything else fails, our seat has to work, and it has to work the first time."

With the hectic pace and pressure to get the job done right the first time, the "Pukin' Dogs" of VF-143 take pride in their ability to have their aircraft ready when the time comes to launch. After long hours in the hangar bay of the carrier or on the flight line at Oceana, seeing that *Tomcat* get airborne makes the hard work seem worth it. But, without that team concept, explained Zimmerman, success just doesn't happen. It's when crunch time comes, that he and his fellow "ground pounders" are at their best.

"Especially when we have a pre-flight gripe," said Zimmerman. "Right before the jet is supposed to go, the aircrew say they have a problem, so you attack it. You fix it immediately, right on the spot, and the aircraft still gets to the catapult

and shoots off the deck. That gives you a major sense of accomplishment."


"What I like more than anything is when one work center has a problem, we all jump in there to get it taken care of. Everybody gets involved and pulls together as a team because we're the Pukin' Dogs, so everybody gets to work. We all want to make that sortie. It inspires everybody and brings us closer together as a group. That camaraderie is what it's all about, working together and watching out for each other."

Schafer is a Norfolk-based photojournalist for All Hands.

Photo by PH1 Spike Call

Up, Up and

Story and photos

An abstract geometric artwork on the left side of the page. It features a complex arrangement of overlapping triangles and polygons in shades of blue and yellow. The shapes are outlined in black, creating a sense of depth and movement. In the lower-left corner, there are silhouettes of two people, a man and a woman, walking together. The overall composition is dynamic and modern.

Early man must have stared in awe at the flight of birds. He must have felt shackled to the earth as they swooped and dove, gracefully defying the gravity enslaving his own feet to the solid ground. He must have climbed to the tops of mountains or into the tops of the tallest trees and waved his arms madly, fearfully bracing himself for the courage to just leap free and soar.

Away

J O I R o d n e y J . F u r r y

For thousands of years, this passion for a seemingly impossible freedom inspired engineers, scientists and crackpots alike. From the tragedy of Icarus' flight to Leonardo DaVinci's foretelling sketches, none could master the fantasy of taking to the air until 1783, when Joseph and Etienne Montgolfier showed the world how simple it could be with a bag of hot air.

Today, hot air ballooning attracts millions of spectators every year at hundreds of festivals and exhibitions all over the world. Despite the sublimely tame nature of the sport, the site of a balloon drifting lazily across the sky still has the power to draw attention. That's what inspires the members of the US. Navy Hot Air Balloon Team to volunteer so much time and effort to getting their massive blue and gold balloon into the air.

After the recent uncertainty about its future, the team has temporarily found refuge back in its original home, Albuquerque, N.M. Well known for its spectacular weather and surrounding mountains that create excellent wind conditions for ballooning, Albuquerque has become the premier spot for balloonists from all over the world. The annual Albuquerque International Balloon Fiesta has grown to almost 1,000 balloons during the past 26 years.

"This is where the Navy balloons belong," said CAPT Tim Thorsen, commanding officer of the NROTC Unit at the University of New Mexico and one of the founding members of the Navy Hot Air Balloon Team. "Albuquerque is the home of ballooning, so it's the perfect place to base them," he said. "Not only are we supporting Navy recruiting, but by being attached to the NROTC unit, we're able to use the balloons to reinforce multiple textbook principles to our future officers."

At a recent balloon festival in Ridgecrest, Calif., team member PR1 Paul O. Bartlett from Carlsbad, N.M. was surrounded by a sea of screaming kids waving blue and gold balloons. He beamed with pride as he entertained them in the shadow of the massive blue envelope.

"This is what it's all about, the kids," he said. "When you see these smiles and the wonder in these eyes, there's no way of gauging the lasting impact it has on them."

Impact is just what the Navy was looking for when it first authorized the formation of the team in 1975. In a letter to



(top) The Navy Hot Air Balloon boldly takes the Navy colors high into the New Mexico sky.

(bottom left) A team member makes last-minute adjustments before liftoff.



(bottom right) A warm predawn flame lights up Pilot CAPT Roger Hull as he fills the envelope with a blast of hot air.



Commander, Naval Recruiting, CAPT Ronald H. Caldwell requested \$22,100 to purchase a hot air balloon to “project a favorable Navy image in support of the Navy’s recruiting efforts.”

After a few years of debate over the logistics of running a team, Navy recruiting’s first hot air balloon was delivered to Albuquerque, N.M., in 1977 emblazoned with the popular slogan, “NAVY, an adventure.” Within a few weeks of its maiden flight over Albuquerque, the big blue, white and gold canopy was making a command performance over the nation’s capital and, soon after, making public appearances all over the country.

The Navy is still the only military service to own and operate a balloon team. While initial fervor over the balloon’s importance may have mellowed over the past 21 years, the enthusiasm of the members who volunteer, and the lasting impression they leave in the hearts of the hundreds of young people they meet every year still pays a huge dividend for the investment.

“There have been times when we would land in an elementary school yard, and the whole school would come out to see us. They would literally stop all the classes and come out to the school yard to see our balloon and talk to us,” said CAPT Roger Hull, the team’s former commander and one of its most ardent supporters.

Retired LCDR Dick Manske, also one of the team’s pilots, might consider that an understatement. Flying quietly on a swift current just 500 feet off the desert floor, you can see something more in his eyes than the focused stare of a former F/A-18 pilot. With an occasional burst of flame from the burners and the whistle of the wind breaking the silence, he scans the horizon in apparent awe.

“It’s a pretty peaceful experience up here,” he said, “Every time I fly this balloon, I’m amazed at how beautiful the view

is when you’re not screaming past it in a fighter.”

A long, streaking cloud of dust makes its way across the distant desert floor, and he points to where the chase truck is speeding down a dirt road to where the ground support team thinks the balloon is going to land.

“It’s not an exact science,” says Manske. “You can control where it lands to an approximate degree, but the wind currents are still pretty much in control.”

The annual fiesta in Albuquerque presents balloonists with the ultimate challenge of launching and flying balloons in a crowd. More than 1.4 million spectators watched “Navy, Navy, Navy” take to the skies during the nine day event. Officer Candidate Heather L. Carpenter from Hominy, Okla., watched in awe as the Navy balloon, surrounded by hundreds of others, bobbed in the wind, straining at its anchorage and waiting for the queue to launch.

“It’s so much fun being a part of a team that represents the Navy. The best part is that we get to show our colors to the world,” she said. “I like that it brings us together as a team in a public place. Here, we can show the public how the Navy inspires and perfects teamwork, but best of all, it’s an environment where the public can get up close and personal to see us work,” she said. No other Navy demonstration team can safely offer such a close interactive experience.

There are things the hot air balloons don’t offer. The technology of balloon flight hasn’t evolved much in its 200 years of existence, so it lacks many of the bells and whistles of the computer age. They don’t fly at supersonic speeds, and they can’t launch a barrage of *Tomahawk* missiles into the enemy’s backyard. But, the giant flying blue and gold billboard and its crew of volunteer Sailors and Marines is leaving its mark somewhere equally important in the hearts of future shipmates.

Furry is a photojournalist assigned to All Hands.



(left) LCDR (Ret) Dick Manske scans the horizon during a flight over the -central California desert.



(above right) Pilot CAPT Tim Thorsen takes a final look at Fiesta Park as the Navy balloon lifts off during the Albuquerque International Balloon Fiesta.

(p. 38 top) The Navy Hot Air Balloon Team blends in with the crowd at the Albuquerque International Balloon Fiesta.

(bottom right) The morning sun splashes across the field as the Navy Hot Air Balloon Team scrambles to get their balloon in the air.



The last time Aviation Machinist Mate 3rd Class Bill Surgi saw his ship, USS *Yorktown* (CV 5), it was early in the morning of June 5, 1942. She was slowly listing to port. When she turned over and sank two days later in 300 fathoms of water, all of her battle flags were flying. Her last position was Latitude 30-46 North, Longitude 167-24 West.

By JO2 Brigitte Barnes



Photo courtesy of Newport News Shipbuilding

Constructed by Newport News Shipbuilding, which was a sponsor of the National Geographic Midway Expedition, USS *Yorktown* (CV 5) was launched in 1936. She was sunk by the Japanese navy at the Battle of Midway in the North Pacific, June 7, 1942.



Photo courtesy of the National Geographic Society

Deep-sea explorer Bob Ballard, a Navy Reservist best known for discovering RMS *Titanic*, pours over sonar charts while attempting to locate USS *Yorktown* (CV 5) 16,650 feet under the sea.



U.S. Navy Photo

During the Battle of Midway, a Japanese plane tries to escape a barrage from USS *Yorktown* (CV 5) (right).



Photo courtesy of the National Geographic Society

The wreck of USS *Yorktown* (CV 5) is seen for the first time in 50 years. The World War II aircraft carrier was sent to the bottom by Japanese torpedoes.

Yorktown sank June 7, 1942, but not before her air group and planes from USS *Hornet* (CV 8) sank a Japanese carrier and damaged a heavy cruiser. The air group is credited with taking down 44 Japanese aircraft during the Battle of Midway. She turned the tide in the Pacific War against the Japanese. "The day of the bombing, we had a picnic on the flight deck," said Surgi, now a 74-year-old resident of Rockville, Md. "We had sandwiches and Charms candy bars. After lunch, the torpedo attack came in.

When I saw the first dive bombers, I took shelter in the catwalk. The bomb hit the flight deck aft of the island. Another bomb went down the stack and we were dead in the water. The third bomb went down the No. 1 elevator and started a fire in the rag room.

"The forth torpedo went wild," he continued. "I saw the airplane from my shelter in the catwalk."

Yorktown's crew had her up and running in a little over an hour, but later two torpedoes hit *Yorktown* on her port

side. All power was lost and she was dead in the water again.

She began to list to port and the commanding officer ordered the crew to abandon ship.

"I was flash burned on my face and my arm was broken," said Surgi. "I just hoped to get off the ship before it turned over. I was wearing an aviator's life jacket and I still had on my tin hat (helmet). I was thrown into the overhead from the torpedoes twice and I think my helmet saved my life. I slid down the lifeline with one arm

and my legs around the line to keep me from slipping. The destroyer USS *Benham*, the cruiser USS *Portland* and USS *Fulton* picked us up and took us back to Pearl Harbor."

A salvage party from USS *Vireo* (AT 144) and a fire party from USS *Hammann* (DD 412) was sent in an attempt to save *Yorktown* and bring her into port. A group of five destroyers formed an anti-submarine and anti-aircraft screen around *Yorktown*.

About this time, four torpedoes were seen approaching the ship on the starboard side. The first torpedo hit *Hammann* amidships and she sank very rapidly. Two torpedoes hit *Yorktown* close to the stern. The fourth torpedo passed just astern of her.

No further salvage was possible. *Yorktown* was seen for the last time early in the morning June 7, 1942, or so the world thought.

Surgi, who received a Purple Heart from his injuries, saw his ship once again when the National Geographic Midway Expedition found *Yorktown* May 19, 1998, resting at the bottom of the Pacific Ocean, 16,650 feet below the surface.

"I saw the massive wreckage and said 'There she is!'" said Surgi. "I already knew it was *Yorktown*. I saw the crane tower aft of the island which is identifiable by its unusual shape. Later, we did find the '5' and 'Yorktown' on the stern which gave us the positive identification."

Dr. Robert Ballard, a Navy Reservist known for his discovery of RMS *Titanic* in the North Atlantic Ocean, led the expedition that found the wreck of *Yorktown*. The National Geographic Society announced the discovery last summer in Washington, D.C.

The expedition was sponsored by National Geographic, the Institute for Exploration and Newport News Shipbuilding.

"This discovery is important because it's through the discovery of the *Yorktown*, that we're able to retell the story of the Battle of Midway," said Ballard. "Clearly, the Battle of Midway was the turning point in the war in the Pacific and a great moment in

American Navy history. The only major ship lost by America during the battle was the *Yorktown*, so it became pivotal."

Exploration of this site allowed the Navy to test its new technology for deep-sea exploration. The scientists and explorers on the expedition tested technology that can be used to rescue disabled

The National Geographic Explorer series will air a television documentary about the expedition on the TBS Superstation April 14 at 8:05 p.m. EST. Accounts of the National Geographic Midway Expedition and of the Battle of Midway will be published in National Geographic magazine in 1999. National Geographic will also dedicate a page on their website <<http://www.national-geographic.com>> to the expedition this month.

submarines and to explore one of the last frontiers on Earth—the ocean depths.

"The Navy provided us with their support ship *LANEY CHOUET* as well as their deep-diving remotely operated system called the ATV or advanced tethered vehicle," said Ballard. Clearly, without the ATV, we would not have been able to go down and verify, photograph and document the *Yorktown*."

"This type of hands-on training experience is absolutely invaluable as we maintain and enhance the skills of our deep-submergence system operators," said RADM Malcolm Fages, Director, Submarine Warfare.

The ATV was used to photograph and explore the ocean floor once the sonar from the MR-1 had located huge objects believed to be *Yorktown* and other ships lost during the battle.

"All the sonar can do is give you a target that may or may not be the *Yorktown*," said Ballard. "Without the Navy's ATV, we would not have been able to actually confirm that we had found it, nor would we have been able to take the beautiful footage.

"USS *Yorktown* is in the best shape of all the ships I've ever seen on the ocean floor," Ballard said. "There is no biological growth on her hull. She is in a perfectly sterile, safe environment, with the rate of sedimentation only one centimeter per millennium. There are no plans to try to bring her up. Mother Nature is providing free storage. Our goal is to create an underwater memorial for her using technologies in the future for people to visit the *Yorktown* where it is, much like people visit the USS *Arizona* in Pearl Harbor."

When *Yorktown* sank, she settled upright about 40 to 50 feet into the mud, according to Ballard. Other than a severe starboard list, she is in perfect shape.

"This exploration would not have been possible without the Navy's help and coordination," Ballard said. "They had already conducted a bathymetric survey of the entire area before we started, and they also provided the support ship."

The expedition was challenging and difficult, according to Ballard. "There was a very large search area. It was four times the search area we had for the *Titanic*. It was 400 square miles and it was extremely deep – 17,000 feet of water. In a portion of the search area were several undersea volcanoes. All those natural phenomena can make your life pretty miserable. But, we were able to overcome all that and succeed. I was relieved our target was the *Yorktown*, because we only had one target.

"With this expedition, we've gone deeper than ever before and we've searched a greater area than ever before," Ballard continued. "It's a thrill to come back with images of this great American warrior.

"This is an incredible story in American history," said Ballard. "I don't think we would have been able to tell it as powerfully as we are telling it, had we not found *Yorktown*. This was one of the most difficult expeditions I've ever had to conduct. I'm relieved and satisfied that we did a good job."

Barnes is a journalist for All Hands.

CyberSailor

The Final Frontier

"I just got finished watching two very interesting but similar movies about that "final frontier" of ours. Yes, space is once again on the minds of Americans after having survived the two biggest hypothetical meteorite showers in history. In both movies we are all saved by a group of heroes sacrificing their lives for the good of mankind. Funny, the only people besides oil riggers qualified to go into space were astronauts.

Because most of us probably don't understand these high-tech scientific minds at the National Aeronautic and Space Administration (NASA), I decided to take a peek into their world. Come along and don't be afraid – I'm CYBERSAILOR and I'll protect you.

As Americans we tend to get complacent and begin to take for granted the cutting-edge technology that surrounds us. We almost expect that America will invent something bigger and better, and we probably will – but that shouldn't stop us from appreciating what it takes to break past the stratosphere and adventure deep into that barren sky called space.

These men and women who do venture into space are somewhat of a mystery. They are sheathed in secrecy, but they still evoke a sense of awe in Americans.

Since "Armageddon" and "Deep Impact" inspired me, I decided to investigate NASA's Website for some goodies. If you take off to www.nasa.gov we can begin the journey together.

The first stop is at their headquarters in Washington, D.C., at www.hq.nasa.gov, where you can find cool things like their budget. (Did you know NASA had 4.4 percent of the federal budget in 1966 and only .07 percent today?)

There you can find out about policy and administrative information and have lots of links to everything from earth science to doing business with NASA. They even have websites for each of the 16 different NASA organization centers. The laundry list starts off with the Ames Research Center, Moffett Field, Calif., at www.arc.nasa.gov, where you can search for meteorites and asteroids that have hit Earth. There is also a link to astrobiology at

<http://astrobiology.arc.nasa.gov/home.html>.

The next site is Dryden Flight Research Center, Edwards, Calif., NASA's primary installation for flight research at www.dfrc.nasa.gov/dryden.html. They also have the SF171 sonic boom recording embedded in Apple QuickTime player and a 360-degree virtual tour using QuickTime VR plug-in.

The Goddard Space Institute, in New York City, is at www.giss.nasa.gov and works very closely with other educational institutes like Columbia University in earth and science research. The Goddard Space Center, Greenbelt, Md., is at www.gsfc.nasa.gov and has a link to the NASA image exchange at <http://nix.nasa.gov>. Even the Independent Validation and Verification Facility, Fairmont, W.Va., which is dedicated to safe and effective software for NASA has a site at www.ivi.nasa.gov.



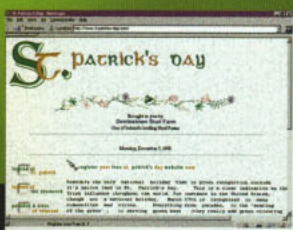
<http://astrobiology.arc.nasa.gov/home.html>



www.ksc.nasa.gov/ksc.html



www.nasa.gov



www.st-patricks-day.com

Green Day

For us Irish-loving, St. Patrick's day types, I checked out an interesting site. If you want information on St. Patrick's day, check into www.st-patricks-day.com. Here you will learn that Saint Patrick was born in and kidnapped from Scotland. He was then sold into slavery in Ireland. He eventually escaped, learned the language and became an ordained deacon, priest and bishop before dying in AD 493.

If you know of any other cool sites for holidays, shopping, how-to or anything of interest please e-mail me the URL and I will check them out.

Earning Your Web-Wings

The Jet Propulsion Laboratory, Pasadena, Calif., www.jpl.nasa.gov deals with robotic exploration and is managed for NASA by the California Institute of Technology.

The famous Johnson Space Center, Houston, is at <http://www.jsc.nasa.gov> and has links to NASA's Space Shuttle Earth observations database. This photo gallery holds more than 250,000 high-and low-resolution photographs of cities, weather patterns and well-known landmarks taken from an astronaut's point of view. The website <http://earth.jsc.nasa.gov> has different search functions and you can even view multiple photos with cutlines. It also has a site remembering Alan Shepard at www.jsc.nasa.gov/pao/shepard. It tells about his life and his various accomplishments and missions as only NASA can.

The well-known Kennedy Space Center, Fla., is at www.ksc.nasa.gov/ksc.html. You can learn about recent launches and video and photos of the launch along with the actual countdown.

Then there is the Langley Space Center, Hampton, Va., at www.larc.nasa.gov, the Lewis Research Center, Cleveland, Ohio, at www.lerc.nasa.gov/LeRChomepage.html, the Marshall Space Flight Center in Huntsville, Ala., at <http://www1.msfc.nasa.gov> and the Moffett Federal Airfield in Mountain View, Calif., at <http://george.arc.nasa.gov/jf/mfa>.

Last but not least, the Stennis Space Center, Miss., Wallops Flight Facility, Wallops Island, Va., at www.ssc.nasa.gov and the White Sands Test Facility, White Sands, N.M., at www.wff.nasa.gov

Well, this is a good start on websites that will wet your whistle and get you interested about space exploration. Remember, if you ever find yourself facing a huge meteorite flying toward your home, reach for the stars and pray there is a Harry Stamper or Spurgeon Tanner around to save you.

This month the famous CyberSailor Site of Excellence award is going to the best functional and informative aviation and squadron sites up and running in the Navy. Since aviation is a wide area, I broke it down to include aviation as one pool and squadrons as another.

The winners for the aviation category are as follows:

The 1st place winner is Naval Aviation Depot, San Diego, Calif., at www.nadepni.navy.mil. Thanks to Robert Goodyear and Dan Ruiz, the site webmasters, the site has a link for both high and low graphics. It provides good information on the area and command. The 2nd place winner is Naval Air Weapons Division, China Lake, Calif., at www.nawcwpns.navy.mil, and Honorable Mention goes to Commander, Strategic Air Wing 1, Tinker AFB, Okla., www.tacamo.navy.mil.

The winners for the squadron category are as follows: First place goes to Helicopter Anti-submarine Squadron (HSL) 7, the "Dusty Dogs" at www.navy.mil/homepages/dustydogs. With LT R. Garate and Aviation Warfare 1st Class P. White as the sites webmasters. Even though they just left for a six-month deployment aboard USS *Enterprise* (CVN 65), they still have a good, useful site.

The 2nd place winner is Helicopter Anti-submarine Squadron (HSL) 11, at NAS Jacksonville, Fla. www.navy.mil/homepages/hs11 assigned to Carrier Air Wing 1 on board USS *John F. Kennedy* (CV 66).

Honorable Mention goes to Patrol Squadron (VP) 30 "The Pro's Nest" at www.cnet.navy.mil/vp30home.htm.

If you didn't get your site listed, e-mail me and I'll check it out and see if it can be rated next time.



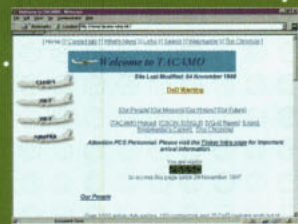
www.arc.nasa.gov



www.ksc.nasa.gov/ksc.html



www.nawcwpns.navy.mil



www.tacamo.navy.mil

Cyber Sailor

Eye on the Fleet

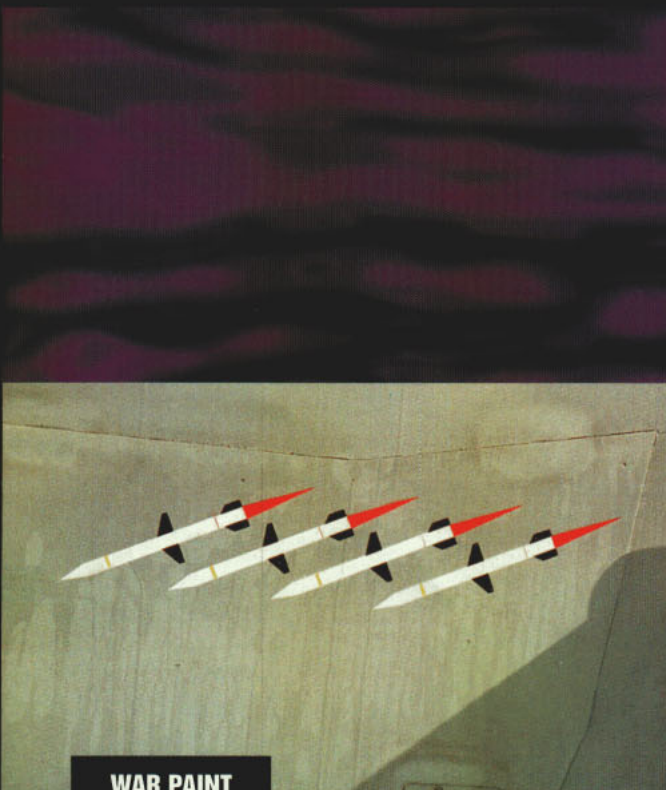
EYE ON THE FLEET

is a monthly photo feature sponsored by

the Chief of Information Navy News Photo Division. We are looking

for **HIGH IMPACT,** quality photography from **SAILORS**

in the fleet, to showcase the American Sailor in **ACTION.**

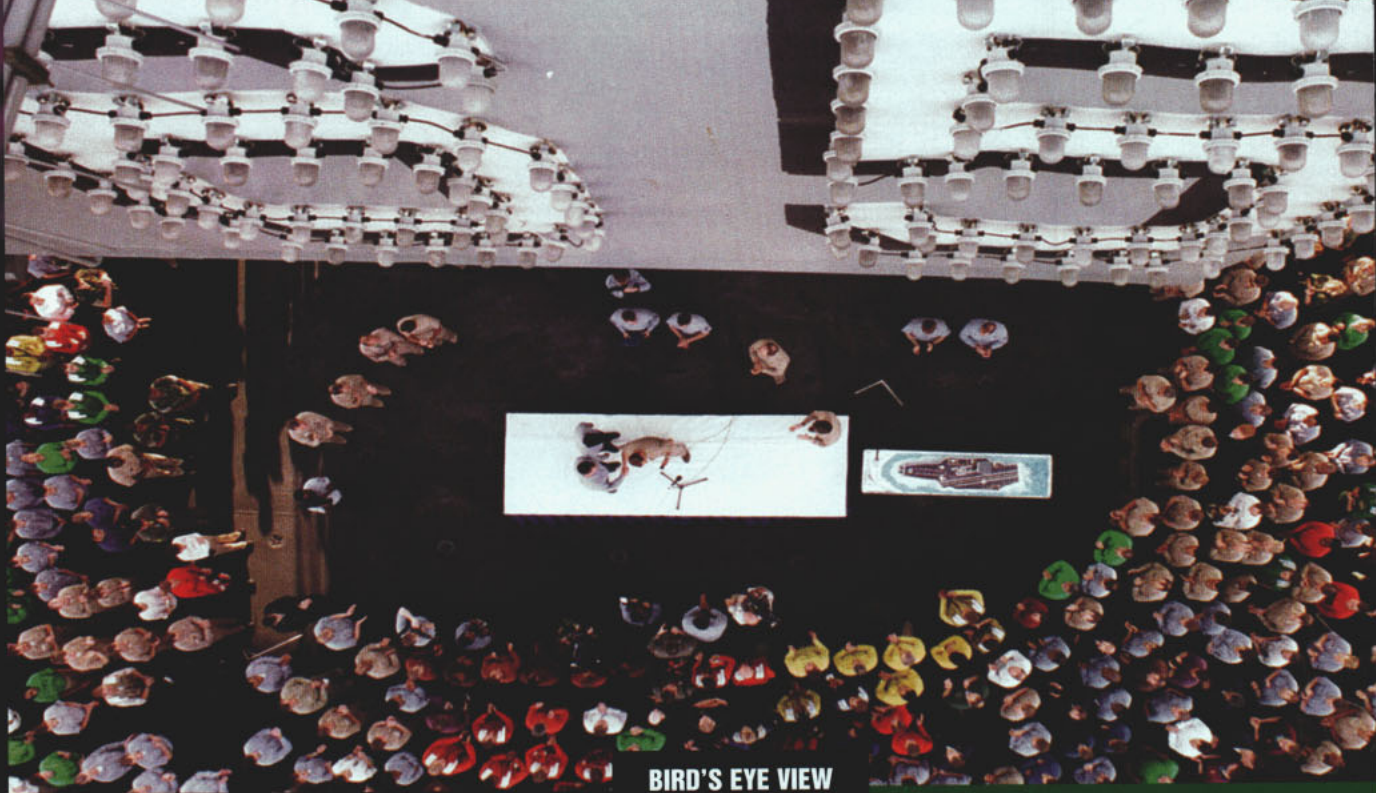


WAR PAINT

Missile icons painted onto the side of an EA-6B *Prowler* symbolize the number of bombing runs made from the flight deck of USS *Enterprise* (CVN 65) in support of Operation *Desert Fox*.

Photo by PHAN Jacob L. Hollinsworth

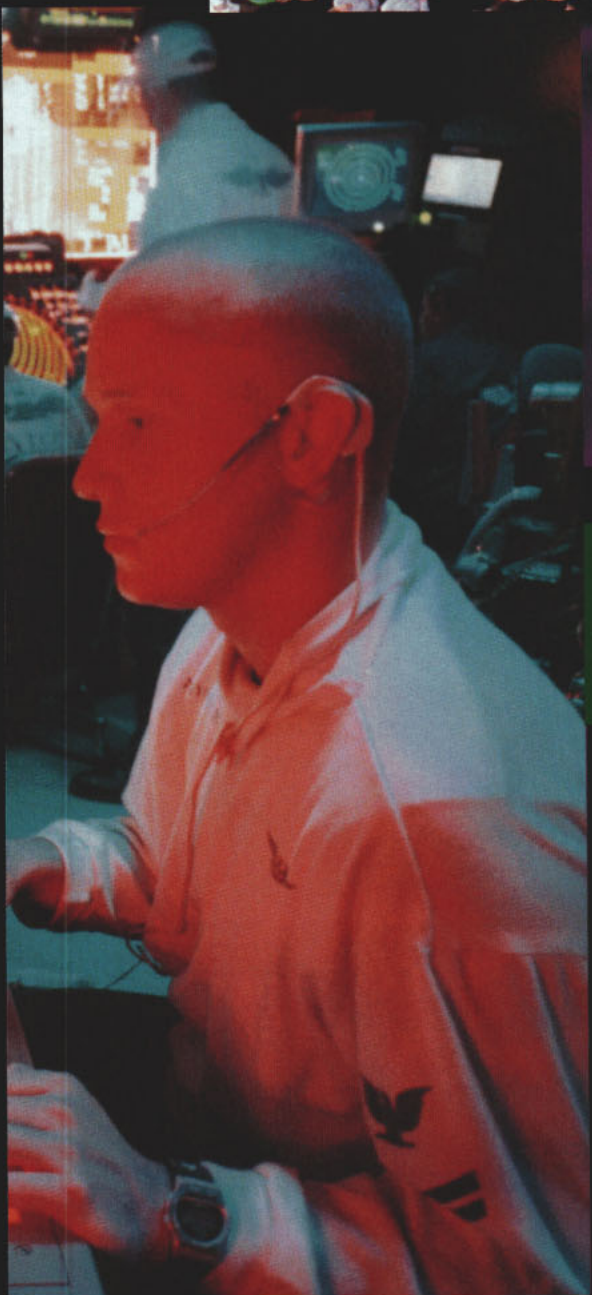




BIRD'S EYE VIEW

Sailors gather around Chief of Naval Operations ADM Jay L. Johnson as he addresses the crew of USS *Enterprise* (CVN 65) in the northern Arabian Gulf.

Photo by PH2 Michael W. Pendergrass



STRIKE CENTRAL

Air traffic controllers working in the Carrier Air Traffic Control Center (CATCC) on board USS *Enterprise* (CVN 65) assist in guiding strike aircraft in and out of Iraq.

Photo by PH2 Michael W. Pendergrass

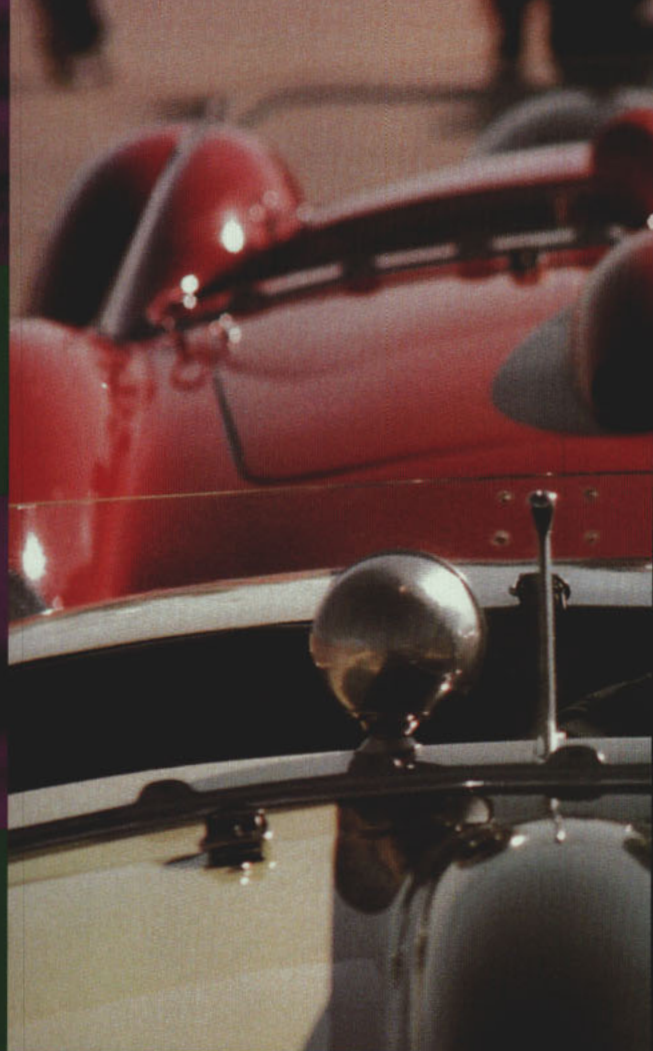
To be considered, forward your images with full credit and outline information, including: full name, rank and duty station. Name all identifiable people within the photo and include important information about what is happening, where the photo was taken and the date.

Commands with digital photo capability can send attached .jpg files to: navynewsphoto@hq.navy.mil.

Mail your submissions to:
NAVY NEWS PHOTO DIVISION
NAVSTA ANACOSTIA, BLDG 168,
2701 S. CAPITOL ST., S.W.
WASHINGTON, D.C. 20373-5819

SPEED RACERS

Vintage race cars drive down the flight line at Naval Air Station North Island for the 1998 Chrysler Classic Speed Festival. This year's event was hosted by the Chrysler Corporation and Culligan Water in support of the 1998 Holiday Bowl in San Diego. Photo by PH2 Ted Banks



CRANK IT UP

A03 Stanley Gibson from Richmond, Va., cranks live ammunition into the gun of an F/A -18C *Hornet* on board USS *Dwight D. Eisenhower* (CVN 69). Photo by PH2 Shawn Eklund





AIR MAN

Marine Corps Cpl. John D. Goekler from Redding, Calif., hauls a compressed-air hose toward a *Harrier* jet on board USS *Belleau Wood* (LHA 3). Goekler is assigned to the 31st Marine Expeditionary Unit's Marine Attack Squadron (VMA) 311.

Photo by Staff Sgt. Eric C. Tausch



LITTLE GREEN MEN

A flight deck crew member aboard USS *Enterprise* (CVN 65) checks the weight setting of the aircraft as they prepare to launch.

Photo by PH3 Timothy S. Smith



Shipmates



Virginia E. Bible

was selected as FY98 Civilian of the Year for Navy Recruiting District, Minneapolis. Bible earned this honor for the second straight year while serving as the budget analyst in the logistics support office. Additionally, Bible volunteers her time in support of the command's Morale, Welfare and Recreation programs.



Aviation Structural Mechanic 2nd Class Manual S. Aranda

was selected Training Air Wing 5 Helicopter Training Squadron (HT) 18 Senior Sailor of the Quarter (3rd quarter, 1998).



Air Traffic Controller 1st Class (AW) James K. Moses

from Athens, Tenn., was selected Military Air Traffic Control Specialist of the Year for 1998. Moses was also selected USS *Enterprise's* (CVN 65) Senior Sailor of the Quarter (2nd quarter 1998). Under his direction, *Enterprise's* 34 air traffic controllers logged 8,800 flight hours and 8,330 arrested landings during pre-deployment work ups.



Intelligence Specialist 3rd Class Penny L. Harris

was selected to attend Officer Candidate School (OCS) in Pensacola, Fla. A staff member at Commander, 7th Fleet, the Ayden, N.C., native has served aboard the 7th Fleet's flagship, USS *Blue Ridge* (LCC 19), which is forward deployed to Yokosuka, Japan, since she enlisted in the Navy in January 1997.

On assignment

"The most rewarding experiences for me as a Navy journalist are those occasions when I stumble on small, virtually unknown units," said JO1 Rodney Furry, who wrote this month's "Who's Gonna Jump First?" on page 30. "They're out there, tucked away in far corners, performing unique jobs that affect the entire fleet. In the case of the test parachutists,

it's clear how important that job is. Whether they're simply humble Sailors dedicated to their specialized craft or secretly coveting their exciting jobs, I'm not sure. But what's certain to me is the Navy's test parachutists have one of the coolest jobs in the Navy, except maybe mine."



U.S. Navy photo

Did you know?

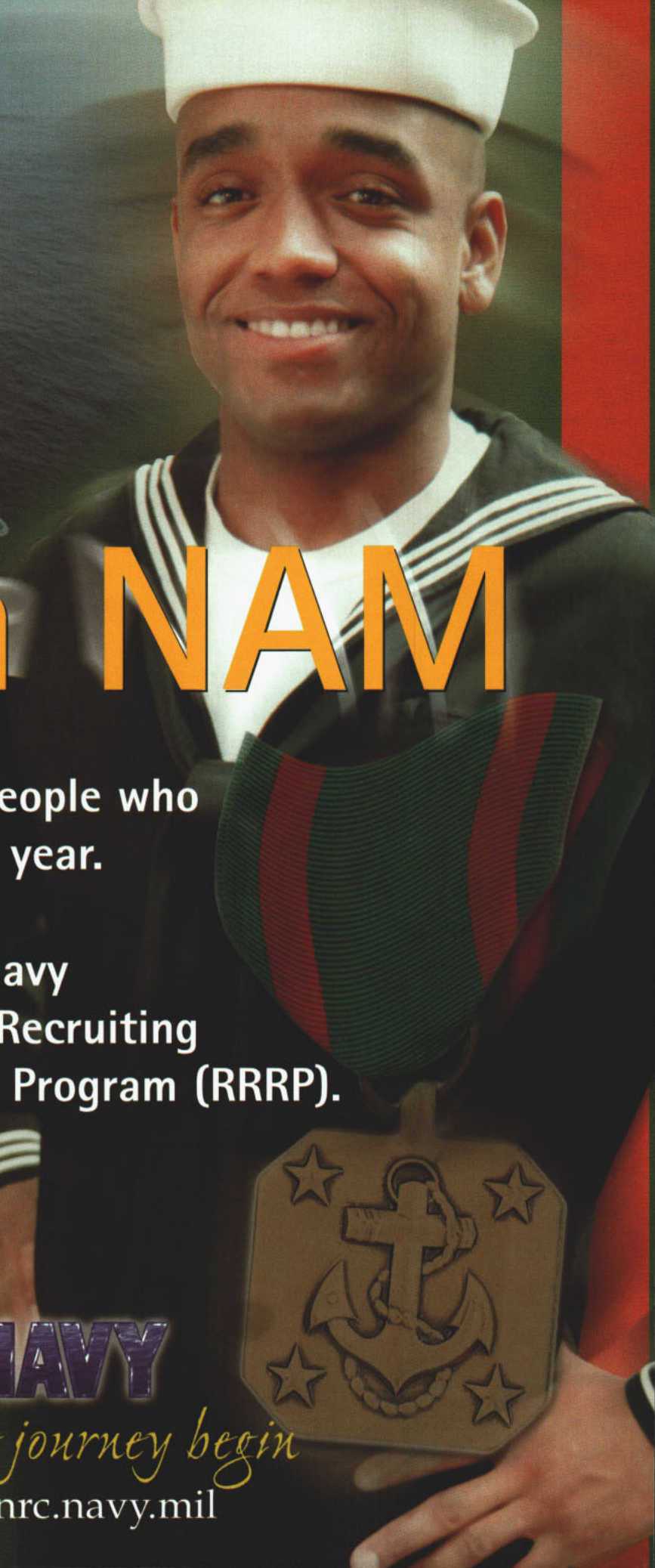
Naval Aviation began May 8, 1911, with the purchase of two hydroplane versions of the Curtiss *Pusher* aircraft to be designated A-1 and named *Triad* for its ability to fly and operate from either land or water.

The First Flight in a turbojet aircraft in the United States was made at Muroc, Calif., Oct. 1, 1942, by Robert M. Stanley, chief test pilot of the Bell Aircraft Corporation. The first jet flight by a naval aviator was made in the same plane at the same location April 21, 1943, by CAPT Frederick M. Trapnell of flight test division, Naval Air Station Anacostia, Washington, D.C. In each instance, the plane was a Bell XP-59A powered by two General Electric 1A turbojet engines. It was the first jet aircraft built in the United States and a prototype of the first jet aircraft acquired by the United States Navy.

The First Launch of an aircraft off a Navy ship was in November 1910 from a temporary wooden deck built on USS *Birmingham* (CL 2) off the coast of Hampton Roads, Va. It was flown by Eugene Ely.

LT Theodore G. Ellyson's launch in a hydroplane, was the first successful launch of a plane from a catapult in November 1912.

Candidates for the first manned space program could be no taller than 5 feet 11 inches, in part because the original flight capsule was only 6 feet 10 inches high. Of the 69 men from the Armed Forces who reported to Washington for consideration in February 1959, six were found to have grown too tall.



Get a NAM

...by referring four people who
join the Navy in one year.

Contact your local Navy
Recruiter about the Recruiting
Referral Recognition Program (RRRP).

NAVY

Let the journey begin

www.nrc.navy.mil

ALL HANDS

OFFICIAL PUBLICATION OF THE U.S. NAVY

MARCH 1999

